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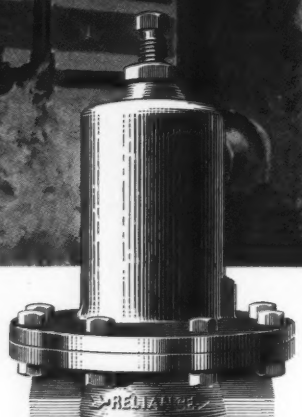

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Oil Import Quota Meeting

On May 4, the present oil import regulations for District V were given a thorough going over when more than 25 oil industry men representing trade associations, integrated companies, independent producers and independent refiners made statements at a meeting in the Federal Building in Los Angeles.

Headed by Assistant Secretary of the Interior John F. Kelly, a group of Oil Import Administration officials heard the testimony of the local oil men. It was the first meeting of this nature held in the West and attracted a day-long capacity audience of several hundred interested spectators.

The most complete statement was made by F. M. Jayne, vice president of Standard Oil Company of California. Brief summary quotes from his statement follow:

"Standard of California supports the principle of import restrictions and believes that a reasonable volume of petroleum imports into the United States, within this limitation, is essential to further this country's long-standing foreign policy of expanding international trade, to preserve our country's access to the abundant supplies of foreign oil, and to promote thereby the security of the free world.

"The import level under the original system established by the Proclamation was instrumental in reducing excessive inventories and therefore effectively served the national security, and should be restored. We believe the administrative change of December 23 which reduced the level of District V crude and unfinished oil imports is in direct violation of the Presidential Proclamation which established the program and is therefore illegal.

"It is our further view that the present implementation of the import program (1) contributes to product price erosion, which leads to crude price erosion; (2) enables small refiners to avoid payment of current prices for domestic crude.

"Standard of California strongly reaffirms its support for re-establishing the historic position of established importers at 80% of their last voluntary quotas.

"Two important provisions of our recommendations are the prevention of exchanges of quotas for domestic crude by those who do not run foreign crude, except for certain valley refiners, and the elimination of the regressive percents formula which grants disproportionately larger quotas to small refiners at the expense of the large. These provisions have contributed in large measure to product and price weakness on the West Coast."

John J. Scott, general counsel of Socony-Mobil Oil Co., said, "We urge that methods used to determine quotas adequately reflect the position of historic importers. Companies which have gone abroad, with government encouragement, to find and develop foreign oil resources, have been heavily penalized, while companies which have never risked capital abroad have been favored."

Scott also called attention to the "discriminatory sliding scale regulation" that allows smaller refiners to import relatively more oil than larger refiners.

David E. Day, vice president of Richfield Oil Corporation, made the following seven recommendations which they recommend be incorporated in a new import control formula for District V:

1—The quota equal expected crude oil demand less exempted supplies of crude oil.

2—The sliding scale be amended so that it actually accomplishes its assumed purpose, which is to aid small business.

3—Quotas set not in barrels but in terms of appropriate percentages of refinery runs.

4—All shipments of refined products to other districts be included in demand for quota computational purposes.

5—The quota cover a period of one year.

6—Quotas be announced no later than 45 days before the beginning of the quota period.

7—"Planned" imports from Canada be nominated publicly and any excess be at the expense of the overseas quota of the importers.

The viewpoint of the independent producer of crude oil was stated principally by Stark Fox, executive vice president of Oil Producers Agency of California.

In summary, this viewpoint is quoted as follows:

1—"We believe an import program to be essential to the health and vigor of the domestic petroleum industry and hence to national security."

2—"We believe that the present segregation of District V from the rest of the country is based upon sound reasoning and should be continued in the interests of the effec-

tiveness of the program."

3—"We believe that the key to the success of the program in District V lies in accurate estimates of supply and demand relationships, which will lead to realistic quotas."

4—"We believe that the program in District V has shown improvement in the years since its inception and promise our continued support, together with such suggestions and criticisms as in our view will assure that the improvement we have seen will continue."

Testimony on behalf of the independent refiners was given by almost all of the refiners individually as well as by the Independent Refiners Association.

Their argument may be summarized as follows:

1—It was stated that the major purchasers of crude oil either produce or control 95% or more of California production.

2—This makes it difficult for the independent refiner to contract for a firm supply of crude sufficient to operate his refinery.

3—This is demonstrated by the periodic shut-down of a number of small refineries.

4—The allocation of import quotas to the refiners has been a large factor in keeping them in operation either by direct use of this oil, or its exchange, and therefore continuation of the quotas is requested.

5—The independent refiners believe their quotas should be increased.

Annual Meeting of San Joaquin Valley Oil Producers Held at Bakersfield May 3

Excerpts from address by Glenn C. Ferguson

Members and guests of the San Joaquin Valley Oil Producers Association, may I once again extend you a hearty welcome to our annual meeting? This represents the third time I have stood here before you, almost invariably to tell you of the ills within our government and the dangers of excessive taxes, and I have no plans to vary that topic this evening. However, this being my last year on the board of directors of the San Joaquin Valley Oil Producers Association, you will perhaps have an opportunity to listen to a different theme next year.

I have the highest regard for this organization and I would like to take this opportunity to thank each member of the board of directors for his close cooperation in making my job as president a little easier. Charlie Premo, in particular, has been a tremendous help and it has been a pleasure to work with him. Milt Kramer, our public relations advisor, has been another who has offered timely advice with respect to governmental affairs and appropriate action to safeguard our interests, and I have learned a lot from him. Everyone on the board has had your interest at heart and has given freely of his time, and, while I think we may have accomplished some results, they are sometimes difficult to measure. But let me assure you, our plight could have been much worse had we not been in there fighting some of the battles of the industry.

I think we were highly instrumental, for example, in defeating the

Glenn C. Ferguson

proposed severance tax in 1959. Had it been voted into law, your over-all tax load would have been far greater than it currently is.

Because oil, in the past, has provided a large amount of added wealth in this area as compared to other counties, government officials, including department heads, and school officials, because restraint was not necessary, drifted into a habit of excessive spending. Instead of permitting our wealth to result in tax savings to each individual, our government officials followed a policy of keeping our tax rate on a comparable basis with less fortunate counties.

The competition for the same tax dollar between national, state and local government is becoming keener and keener. I understand there have been some back-door negotiations, and I trust that something of a satisfactory nature can be worked out; one which will not merely postpone the payment of additional taxes to a later time and thereby result in an unwise and costly crash program of one kind or another.

Last year at the county budget hearings we made every effort, along with several other organizations, to convince our county government that it should hold the line in spending. In spite of our efforts, the tax rates increased $.17 per $100 of assessed valuation. Had we not been there, we have no idea how much higher it might have gone.

Because of the problems forced on county government from the state level, we must expand our efforts in the direction of Sacramento to make clear to the legislature the compelling need for restraint in programs which tie the hands of local authorities and spiral local costs.

Boards of Supervisors in other counties are faced with the same problems as ours, and yet taxes on a per capita basis, for the most part, are far below those in Kern County.

Kern County ranks 10th in the state in taxes per capita. Only nine very small counties, the largest of which has a population of 14,500, have a per capita tax higher than ours. The larger the county, or perhaps I should say the more highly populated, the lower the costs per capita, except for Kern County. Kern County's tax on a per capita basis is 50 to 75% higher than nearly

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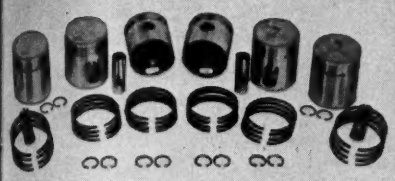

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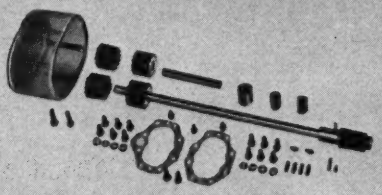

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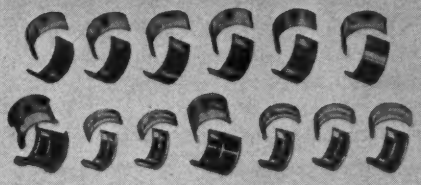

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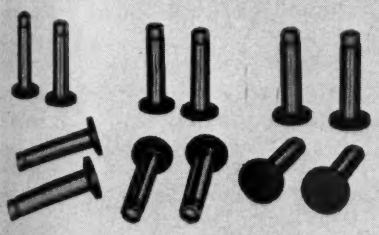

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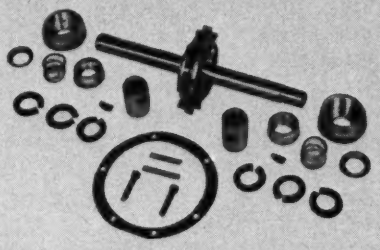

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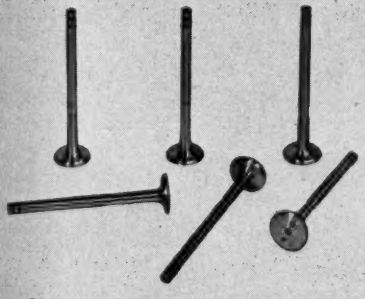

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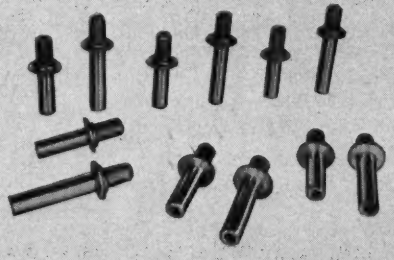

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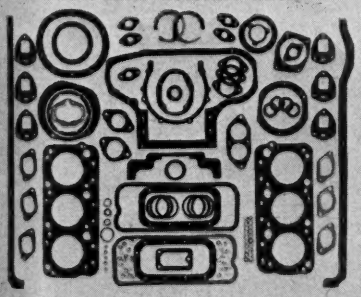

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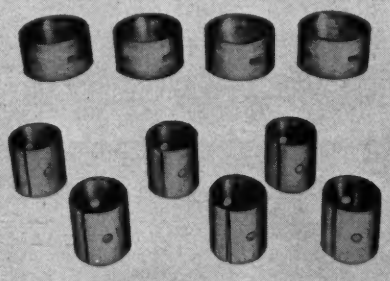

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all other counties in the State of California, with the exception of the nine small counties.

Kern County has a population of about 296,000 persons, as compared to 14,500 in the most populated county of the nine small ones, yet our taxes per capita are nearly as high. The local taxes per capita in Kern County for the year 1959-60 amounted to $174.99, compared to a state average of $133.62. Riverside County, the nearest in population to Kern County, had a per capita tax of $133.89. Imperial, a strictly agricultural county with less population, had a per capita tax of $98.89—a considerable difference between this figure and Kern County's figure—and, of course, they are subject to the same state laws that we are.

Kern County, just as several other counties in the state without oil production, would be strictly dependent upon agriculture for its economy. These counties have learned to live within their means.

The oil industry currently carries about 35 or 36% of the county tax load. A few years ago, the industry paid as much as 50%.

At the state level, our Governor speaks of fiscal responsibility. A balanced budget is certainly a result of fiscal responsibility, but the term would mean more if the budget was balanced by holding expenditures to income, rather than determining how much will be spent and then increasing income through taxation to obtain the balance. Those in government who overlook the latter course do a great deal of harm to our entire economy.

Our industry's problems at the national level still include imports and the very strong attack on the depletion provision of the Internal Revenue Laws. During the past year, your board of directors has cooperated with the I.P.A.A. and the Liaison Committee of Independent Oil Producers, and we have kept in very close touch with our representatives in Washington and with the Department of Interior concerning the import problem. As a result, I believe we have a more nearly realistic program than we had when it was first inaugurated. At least we are now able to sell our oil; something that we could not always do a year or two ago unless we disposed of it considerably below posted price. We still are not happy with the posted price by comparison to the 1957 level. Certainly, the present posted price is not one to stimulate a strong exploratory program for new reserves.

Once crude oil prices are restored to the 1957 levels, you can look for a much stronger economy in this area and the resumption of a good wildcat program which I am certain will meet with some success. How long it will be before prices are restored I do not know. Some readjustment in the lower gravity oil is long overdue, and we have been hoping that this might not be too far in the future. Of course, if the depletion provision of the Internal Revenue Laws were to be knocked out or greatly reduced, any readjustment in the price of crude oil would be nullified and you can rest assured that little or no wildcatting would ever again be done in Kern County. Certainly not by the independent oil producers, for they will gradually be absorbed by the major integrated oil companies as a result. The trend towards consolidation of the oil industry should be of great concern to the public at large. Reduced numbers of companies through consolidation will result in a smaller overall exploration program, fewer wildcat wells drilled and fewer discoveries made, certainly within the continental limits of the United States, which, in the long run, must inevitably result in a scarcity of supply and vastly increased prices to the consumer.

In cooperation with the I.P.A.A., we have had an excellent program in progress—fostering and promoting the continuance, as well as the principle, of the depletion provision of the Internal Revenue Laws. We have tried to impress that a reduction of the depletion provision is merely an increase in taxes on the industry, and, as such, it is an added cost of production and must be passed on to the consuming public in the form of higher prices. We stressed heavily what I stated a moment ago—that with consolidation there will be fewer wildcatters to find new reserves. Whether or not these men's minds are made up and do not care to be confused by the facts remains to be seen.

If there has been any question in your minds as to whether or not the monies collected by this organization are being spent to good advantage, I can assure you that they are.

This will constitute my report to you on the activities of the organization for the past year and, since we have a busy schedule, we will proceed to the balance of the program.

A.P.I. Starts Oil Burner Research

The American Petroleum Institute has selected five organizations to work on the principal projects of a special oil burner research program, A. J. Rumoshosky, director of the Institute's Marketing Division, announced recently.

The projects will be started this month.

The names of the research groups, and the projects on which they will work, are:

Armour Research Foundation, Chicago: air-fuel mixing and recirculation;

Arthur D. Little, Inc., Cambridge, Mass.: new means for fuel atomization;

Atlantic Research Corp., Alexandria, Va.: ways to minimize deposits during vaporization of No. 2 heating oil;

Battelle Memorial Institute, Columbus, Ohio: more suitable ignition systems, air compressors and fuel pumps for small oil burners;

Stanford Research Institute, Menlo Park, Calif.: the effects of spray-droplet size on combustion.

The purpose of the research program, Rumoshosky said, is to develop, interpret and disseminate new technical information that will assist equipment manufacturers in producing improved equipment using distillate fuel. All research findings will be dedicated to public use, he said.

The Technical Advisory Group, composed of oil company research executives serving as advisors to the API Fuel Oil Committee, is supervising the research program.

"The selection of these outstanding research organizations," Rumoshosky said, "was made by the Technical Advisory Group after long and careful review of all research organizations with pertinent experience and facilities. Now that the selection has been made, work on each of the projects will be in progress within 30 days."

Standard Oil Co. of Calif. Raises Alaskan Crude Prices

Standard Oil Company of California, Western Operations, Inc., announced an increase of 20 cents per barrel in the price it posts for crude oil from the Swanson River Oil Field.

The price boost will open the door to a substantial increase in royalty income to Alaska this year, with more to come as production increases. Under the present arrangement with the U. S. Department of Interior's Bureau of Land Management, most of the royalty funds are earmarked for Alaskan schools and roads, and for the state's general fund.

Production from the Swanson River Field has increased steadily since oil was first discovered there in 1957. More than $35 million has been invested in the venture by Standard, Richfield, and two other participating oil companies.

C. V. Chatterton, local district superintendent of production for Standard, pointed out that the price increase "will also act as an incentive for the further development of Alaska's oil resources."

Union Oil Co. & Signal Oil Build Pipe Line

A steady stream of crude oil will soon be flowing from wells in the heart of Los Angeles to refineries at the harbor—unseen and without inconvenience to the public. The wells are in the new Las Cienegas field in the La Brea-Crenshaw district. The field was discovered last year by Union Oil Company and Signal Oil and Gas Company.

Construction has started on a pair of pipe lines to carry the oil and gas from the drillsite, near the corner of Pico Boulevard and La Brea Avenue. A 6-inch crude oil line will connect the field with Union's trunk pipe line at Inglewood Boulevard. A shorter 8-inch natural gas line will join another pipe line at Exposition Boulevard. Both lines should be completed in mid-June, according to Union Oil engineers, who estimate it may take six months for the field to reach full production.

A natural path for the pipe lines exists: the former Pacific Electric right-of-way down the center of Venice Boulevard. By laying pipes in this unused strip and tunnelling under busy cross streets, the construction companies expect a minimum of interference with traffic flow.

The drill site is being landscaped and surrounded by a tinted concrete block wall which will mask the production facilities from the street.

According to Union officials, the two companies plan to continue exploration activities. The derrick will be moved to a second drillsite about three miles away, near the corner of Western Avenue and Adams Boulevard. No date was given for spudding a wildcat well at this location.

Welex Opens Another Location

Welex recently announced the opening of its fifth California location at Woodland.

In charge of the new station, which will offer the California oil industry complete wireline services, will be sales engineer Billy Crice, who transferred to Woodland from Welex's Bakersfield district.

Equipment is being moved into the area following completion of a new building at 1240 Oak Street. Other Welex locations in California are in La Habra, Bakersfield, Ventura, and Pasadena, which is division headquarters. California division manager is H. A. Woodard.

Welex is a division of Halliburton Company.

RICHFIELD OIL MEN ON BUSINESS TRIP TO OSLO—Thomas Cook (left), manager of Marine Terminal and Charter for Richfield Oil, Los Angeles, is pictured with Jack Woods (right), attorney for Richfield, just before boarding an SAS DC-8 polar jet recently to Europe. Both gentlemen are en route to Oslo. For Cook this will be his first trip back to Norway since he was a child.

Mauthe Notes Encouraging Trends at Youngstown Sheet & Tube Co. Meeting

J. L. Mauthe, chairman, told shareholders of The Youngstown Sheet and Tube Company at their annual meeting recently that "we are encouraged by the improving trend of new orders and by the better tone of business in general."

As to steel shipments from Youngstown mills, Mr. Mauthe noted that "March was the best month we have had since last August."

He continued:

"There is evidence that the worst is behind us and that steel operations and general business activity are on the rise.

A.A.P.G. Exploration Score Rates 1960 as "Poor Show"

According to the American Association of Petroleum Geologists, California exploratory drilling activities in 1960 were broken down into the following classifications: new field, 211—17 successful; new pool, 129—26 successful; deeper pool, 24—3 successful; shallower pool, 1—1 successful; outpost, 64—23 successful. Of the 70 successful wells, 28 were oil producers and 42 were gas producers. The 1960 success rate in the state was 16.3 per cent. In 1959 it was 16.6 per cent. Excluding outpost wells, the 1960 success ratio would be 12.8 per cent.

Of Alaska's three successful wells, one was a new field gas producer and two were outpost oil.

The AAPG analysis of exploratory activities in the United States shows that the percentage of successful wells was the lowest since 1948. Of the 11,704 wells drilled, 2,189 were producers and 9,515 were dry holes. The success rate was 18.70 per cent, compared with 19.83 in 1959 and 19.46 in 1958. The only time (since statistics were compiled in 1944) the ratio was lower than last year's was in 1948, when it was 18.25.

Industry's success, or rather lack of it, was particularly emphasized by AAPG figures covering new-field wildcats for the period between 1954 and 1960. The development history for this six-year period showed only one well out of 60 proved profitable.

Petroleum LORE and LINGO

By RICHARD SNEDDON

It's Everywhere

The pervasiveness of the oil influence is so nearly absolute that it is impossible for anyone to grasp its full significance. There are millions of people who are dependent for at least some important phase of their existence on the continued flow of petroleum and its products, and a very large proportion of these people would be surprised beyond measure if the fact were brought to their attention. We have all become so used to the comforts and conveniences that derive from this drab, uninteresting looking stuff we call crude petroleum that we accept its wonders as casually and unconcernedly as we do these magnificent spectacles, the rising and setting of the sun.

Without It?

Half the energy requirement of the entire free world and two-thirds of our own need here in the Western States comes from petroleum. This ubiquitous substance and its multitudinous products meander in and out of our daily routines to an extent that could only be appreciated if they were suddenly to become no longer available. Think what a staggering blow it would be to all humanity if the supply of gasoline and lubricating oil were to be suddenly withdrawn! So greatly are we dependent on these two commodities that without them the world would practically come to a standstill. Transportation would revert back to the era of the horse and buggy and the wheels of many industries would come to a grinding halt.

Creator of Enterprise

The sphere of petroleic influence widens daily. Experts estimate that by 1975 the world power market will have doubled and despite predicted increases in atomic and solar energy utilization, oil will largely have to fill the bill. Geologists tell us that there are in the continental underground at least 500 billion barrels more of the precious fluid just waiting to be discovered, raised, and processed. That will keep a lot of people busy, for it is astonishing how many people are already kept busy by petroleum and its burgeoning offspring. Oil is without question one of the greatest creators of enterprise in the history of trade and commerce.

How Big Is Oil?

There is a prevalent belief that the petroleum industry is a huge, tightly contained and completely self-sufficient entity; that a very few oil companies own and control all the oil in the United States; that these companies are closed corporations; and that the chances of any ordinary individual crashing into the oil game are extremely remote. Soap-box orators scream indignantly about the bigness of the petroleum industry, without any attempt to qualify their protestations and without apparently ever realizing that it is the universal use of oil that makes its handling big business, not the selfishness of the people who handle it. Actually, the soap-box orators may be interested to learn that it is even bigger than they think. It is so big, indeed, that almost everybody is in it to some degree, and they and all the rest of us are extremely fortunate that it is so big, because oil is one of the chief deterrents of the war mongers.

Spreading Interests

There are, today, 200,000 service stations providing fuel and lubrication for 71,000,000 motor vehicles, which in turn provide transportation for the entire United States, and don't forget that 90% of these service stations are independently owned and operated; but we shall come to that later. Meantime, let us first make it known that in the oil industry proper there are more than 30,000 companies, entirely unrelated, and in keen competition with each other for the oil markets of the world. But —and this is the thing that we most want to emphasize—in addition to those concerns that are normally assumed to constitute the oil industry, there are thousands more, small and large, that actively participate in directly related business and derive much or all of their income from oil.

Land Owners

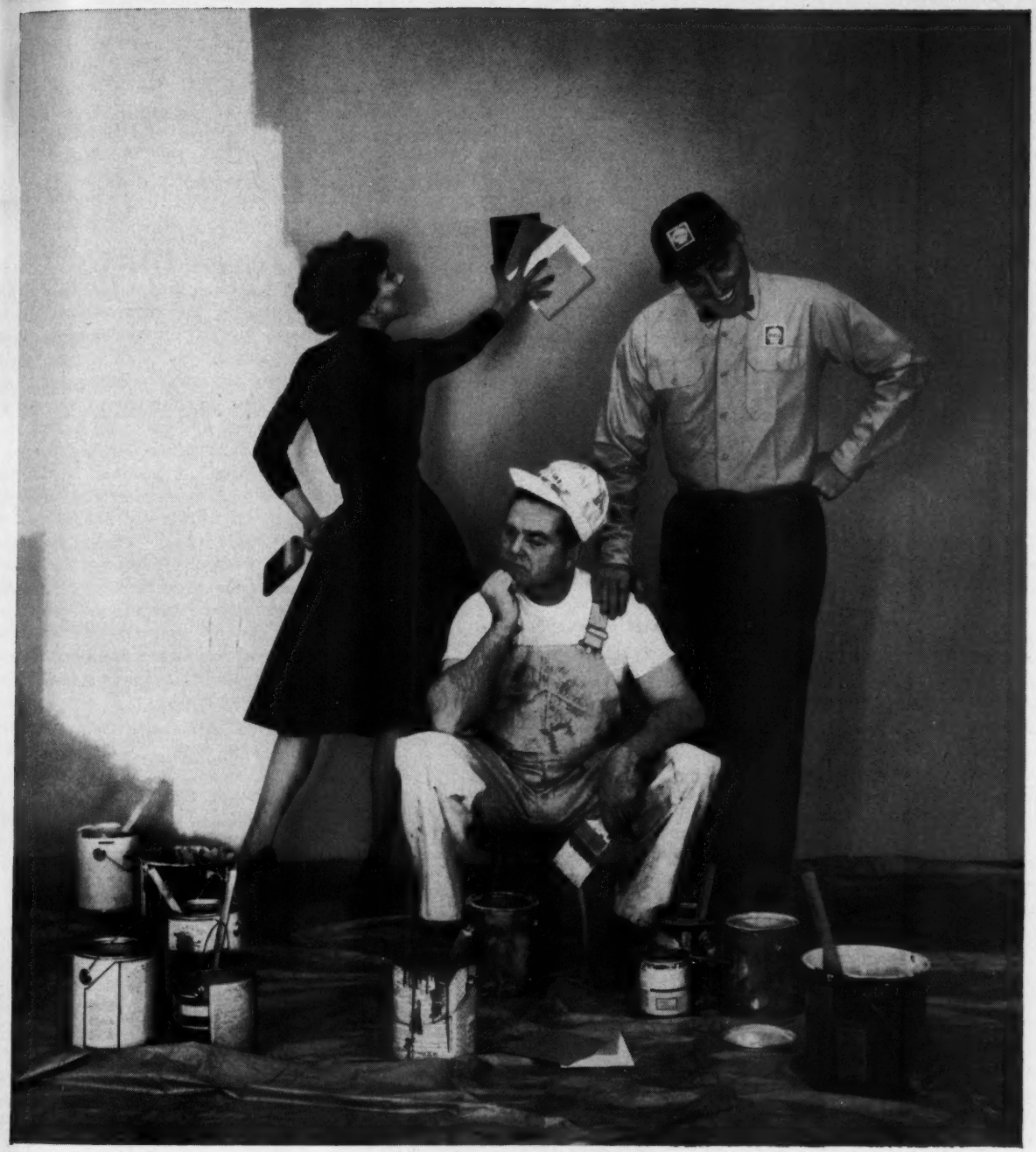
Taking the various phases of petroleum operation in their logical sequence and beginning with lands and leasing, it may be remarked that all large companies maintain their own lands and leasing staffs. Their main function is to acquire or lease lands for oil well drilling, and for plants, warehouses and administration buildings, but it is rarely that a land negotiation of any consequence is consummated without the assistance of independent consultants, lawyers, local realtors, and of course, the land owners themselves. None of these is listed as oil companies, but it can certainly be claimed that they are direct beneficiaries of petroleum exploitation.

Stockholders

It has been estimated, incidentally, that royalty owners and oil company stockholders in the United States number 3,000,000, which definitely dissipates the closed corporation idea. And it might further be noted that up to this point we have been discussing only large companies with their own lands and leasing departments. It should be easy to understand that the smaller companies, vastly greater in number, are almost completely dependent on outside help for the acquiring of lands and so are an even greater stimulator of private enterprise of this type.

The Oil Finders

Exploration may take place before or after the land deals have been completed, but in either case, the result is the same. Although many companies have their own geologists, geophysicists, paleontologists and



The oilman paints a "dream" house — When the lady finally makes up her mind, she can be sure her choice is a good one. Solvents from petroleum will give her the paint job she wants, and keep her new home beautiful for years and years to come. Long-lasting finishes for home and industrial use represent another achievement of petroleum research — and another note of thanks the consumer owes to you, the oilman. If you hear someone criticizing oil, you've good reason to speak up in return. The thousands of products derived from petroleum are proof that you've helped to make it one of the world's most versatile natural resources.

SHELL OIL COMPANY

other geoscientists, they nonetheless make extensive use of independent organizations and individuals. As an indication of the extent of such independent operation, some geophysical concerns have as many as 50 parties conducting surveys in the United States, Canada and other parts of the world. A crew consists of about 20 men and several substantial mobile equipment units, each having a value in the neighborhood of $200,000. The total staff of such a company may reach 1,000, and there are a number of them of this size in various parts of the country. There are, of course, many individuals and smaller firms performing the same type of exploration service, and most of them appear to be well occupied.

The Expanding Search

Then there are the equipment and instruments that are used by these people. There is the rolling stock on which they transport themselves and their paraphernalia into the usually inaccessible areas in which they work. The gravimeters, seismometers, magnetometers, automotive units, helicopters and planes are not made by the oil companies. They are the output of countless other engineers, scientists, tradesmen and mechanics who, in many instances, probably don't even know that they are working indirectly for the oil industry. If the exploratory project is based in some remote foreign area, transportation becomes of prime importance, and another group of normally unrelated workers are brought into the picture. If crews of sufficient number are engaged in these distant undertakings, such matters as temporary housing, food and clothing supplies, facilities for the maintenance and sometimes replacement of machines, and a dozen and one other contingencies excite the need for caterers, packers, shippers, cooks, commissaries, and other agents and agencies never considered a part of the oil industry.

The Contract Drillers

When we consider the drilling end of the petroleum business, the creation of related but independent enterprise becomes more pronounced than ever, because at the present time 90% of all oil well drilling in the United States is done by independent contract drillers who own their own rigs, have their own crews and drill wells for the oil companies on the basis of quoted footage costs. A recent release by a recognized authority indicates that there are now about 2,100 rotary drilling rigs active in domestic oil fields, which at a conservative estimate means that contract drillers are operating 1,890 rigs. Assuming 15 men to a rig and three more for engineering and administrative aid, it is safe to say that 34,000 individuals are now engaged in this species of activity, working for the oil companies yet a completely independent enterprise.

The Equipment People

Figuring $200,000 per rig for these 1,890 contract rigs, and that is a very conservative figure, the total investment amounts to $378,000,000, which means a sizable bit of work for the equipment manufacturers who produce the rigs. Here is another independent segment—the petroleum equipment industry—that employs thousands of men in a wide diversity of operations and occupations to turn out the tools, machines and equipment that the industry needs to continue its normal function. In addition to pipe, pumps, prime movers of all descriptions, draw works, steel tankage, etc., that command the efforts of every type of engineering specialist for their manufacture, we must also consider the production of such commodities as drilling muds and cements, which are now multimillion-dollar businesses giving occupation to a great many more people who are not likely to term themselves oil workers.

Loggers and Surveyors

In addition to equipment and commodity manufacturers, there are thousands of people performing specialized services for the drillers on a quite independent basis. There are, for example, electric loggers, hole surveyors, well shooters, gun perforators, fishing experts, and formation testers, just to mention a few. These, in the light of modern understanding of sub-surface conditions, have become as essential as the drilling tools themselves yet are outside the perimeter of the oil company proper and are prime examples of the manner in which oil is still expanding its creative influence. The production phase of the oil business also has a tremendous effect in the creation of new enterprise. When one considers that there are almost 600,000 producing wells in the United States today, it is not difficult to realize the tremendous outlay that has been made for pumps, piping and storage tanks alone. This again has been an industry requirement that has been taken care of by independent manufacturers, and has given occupation to many American workers.

The Pipe Line Effect

In its pipe line departments the oil industry has over 190,000 miles of oil and products lines to look after, and this does not include many miles of the large natural gas lines. All of this was fabricated by outside companies, and most of it was laid and tied together by independent construction companies. In the old days, a man walked or rode a horse and traversed the line at intervals to spot leaks. Now an independent concern swoops over the line in an airplane under contract to repeat the performance at stipulated intervals. Independent gaugers and testers represent the lessor and see that accounting for his oil is as it should be.

Refining

The present capacity of American refineries is approximately 9,700,000 barrels per day, and it is only necessary to look at a modern refinery, with its huge cat crackers and astonishing assembly of twisty tubes, towers, tanks, etc., to know that the construction of all these units must have employed many people. The refiner depends entirely for its equipment on outside organizations, and there are some very large companies, staffed with process and design engineers and other technological aids which not only develop exclusive refining processes but actually design and build the plants and then provide operators to run them until the regular refinery operators are familiarized and can take over.

The Incidentals Are Big, Too

Then there are the manufacturers of such incidental necessities as insulations, water coolers, treating clays, acids and alkalies, catalysts, etc., all employing large numbers of American workers, and all quite separate and distinct from the oil companies themselves. Most people are familiar with the chemical known as tetra-ethyl lead, the gasoline antiknock agent which is used by refin-

ers in all parts of the country and has promoted the growth of a veritable industry with, in addition to the manufacturing and administrative forces, many sales engineers, and distribution agencies of infinite variety. Now we can add to these other chemicals such as tetra-methyl lead, tricresyl phosphate (TCP) and boron, all designed to impart special properties to the fuels of which they become a part, and all stimulating the growth of the American industrial system. The evolution of these special fuels and all-purpose lubricants has made possible the modern automobile, airplane, space machine and guided missile, which have kept another sizable segment of the American populace busy.

The Products of Research

Then there is research, for which the petroleum industry has spent billions of dollars and has engaged the brilliant minds of hundreds of super-scientists to improve its processes and develop an amazing array of new products. These latter have not only played an indispensable part in the advancement of pure science in many areas, but have been equally indispensable in the applied sciences that are being directed towards the conquering of space, penetration ever deeper and deeper into the earth, and perhaps most noticeable of all, to the initiation of literal hundreds of small and big new businesses. The number of people, for example, who have found interesting and profitable occupation exploiting the qualities and applications of petroleum-produced plastics is almost beyond conception.

Plastics

Today plastics seem to be used practically everywhere. They are found in automobiles, lawn furniture, washing machines, refrigerators, pipe lines, ropes, garden hose, waterproof clothes and surgical instruments. They are even substituted successfully for defective elements of the human anatomy. You find them in television sets, keys for typewriters and computers, telephone booths and instruments, hoola hoops, boats of every description, swimming pools, veranda chairs and lounges, bathing suits, buckles, buttons, luggage, combs, contact lenses, dentures, golf clubs, tennis rackets, fishing rods and reels, saddles, picnic baskets and tables, and a great assortment of gadgets and things ranging from adhesives to zippers. The list is endless and it has inspired hundreds of persons to adventure in brand new types of business and to hire thousands more to help them in their enterprises.

Petrochemicals

The same is true of petrochemicals, the growing number of which is almost overwhelming. Reference has been made in other chapters to the great contribution that they have made to medicine and national health. There are, for instance, such medical aids as anesthetics, antihistamines, aspirin, vitamins, alcohols, antiseptics, sedatives, and so on far into the night. Petrochemicals have stocked milady's boudoir and dressing room with a wealth of interesting and enticing new cosmetics. To agriculture they have given an imposing array of insecticides, fungicides, germicides, sprays for many purposes, hormones, and nutrients of wide variety, especially

API Cut Thread
Most susceptible to fatigue is thread root area, where notch effect exists.
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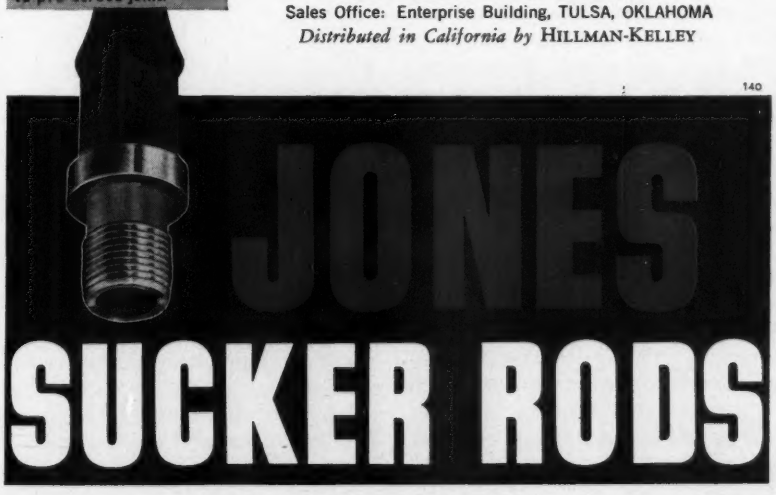


ammonia and ammonium products which have increased crop yields no end. They have given us extraordinary fabrics, unbelievably light, strong and resistant. They have furnished newborn industries with hitherto unavailable source materials from which to manufacture countless unheard-of commodities. All of which is a mere skimming of the petrochemical surface but will show how crude oil becomes the parent of a mounting family that is putting more and more people to work every day.

The Mariners

It would perhaps have been appropriate to mention marine transportation along with pipe lines. Both have the dual function of carrying crude and refined products, so that these departments fit in logically either before or after the discussion of refining. In any case, it is estimated that there are now about 900 tankers in the service of American oil companies, all built by independent concerns. Most of them are owned outright by the industry, but a sizable proportion are the property of private and independent owners. In combined tonnage these tankers amount to one-third of the total tonnage in United States water-borne trade, and they employ 25,000 people whose business is marine navigation and transportation and whose relation to the oil industry is quite incidental. Add to these some 2,100 barges and another 5,000 men engaged in this traffic and it can be seen that the oil industry does its fair share of providing employment for the mariners, too.

Marketing

Last we have the marketing phase of the business, with its 200,000 service stations already referred to, largely owned by independent Americans. There are more than 15,000 jobbers and distributors who make their living by getting the products of the petroleum industry to the public. In the distribution process, oil companies use almost 100,000 tank cars and endless transportation units and systems besides its own.

And Here We End

It might be pertinent in conclusion to cite the fact that the oil industry is keenly alert to the needs of tomorrow and has instituted scholarships of many types in colleges all over the country. Thus, besides stimulating the birth of new industries, it prepares young Americans to take important places in the industry of the future. Oil is big business. There is no question about that. But it is big in a wholesome and comforting sort of way. It is perhaps the biggest creator of new and independent enterprise in the world. It is our biggest security in this distressing time of international wrangling and confusion. Sure it is big, but we need that kind of bigness!

Union Oil Co. Makes Large Profit Gain

Union Oil Company of California's earnings for the first quarter of 1961 were 66% higher than for the corresponding period a year ago, Reese H. Taylor, chairman, reported at the annual shareowners' meeting in Los Angeles.

Earnings for the first quarter were $9,164,026, or $1.05 per share, compared with $5,529,859, or $.63 per share, for the first quarter of 1960.

"Although uncertainties about the national economy, as well as product prices, make an accurate forecast difficult, we anticipate that earnings for the full year of 1961 will surpass 1960's total of $3.96," said Taylor.

"Union's sales and earnings are up," said Mr. Taylor, "because we are obtaining more income from more activities, and at the same time lowering operating expenses.

"Another contributor to profits of increasing importance is the Collier Carbon Chemical Corporation, a major subsidiary, whose sales have risen 33% in the past two years."

Taylor emphasized that "we are aggressively seeking profitable opportunities for expansion through diversification and acquisition."

"We believe it advisable," he said, "to continue both geographic and product diversification compatible with our present business. Acquisitions will be made only if we are confident they will add to the company's future profits and growth.

"Collier's expansion into the naphthalene field is an example of Union's diversification program. Collier will use a new patented process developed by Union's research department for making naphthalene from petroleum. Collier and a partner are building a large plant on the East Coast and planning a second plant on the West Coast. Capacity of the two plants will be approximately 30% of the nation's total 1960 consumption of naphthalene. Collier is also expanding in other directions with a new 250-ton-per-day sulfuric acid plant in Los Angeles and an anhydrous phosphoric acid plant at Kellogg, Idaho, using an exclusive process developed by Union and Collier. Collier will also operate the recently acquired Pacific Guano Company, marketer of fertilizers on the West Coast."

All directors were re-elected. At the organization meeting of the board subsequent to the shareowners' meeting all officers of the company were re-elected. Dr. W. E. Bradley, director of research, was elected vice president for research.

Ninety per cent of the outstanding common stock eligible to vote, or about 6,675,000 shares, were represented at the annual meeting.

Sunset Installs Full-Scale Water Flood at Placerita

Sunset International Petroleum Corp., diversified oil and gas producer, has started full-scale secondary recovery operations in the Placerita field near Newhall, Calif., that will increase the company's oil recovery by an initial eight million barrels, Morton A. Sterling, president, announced.

Independent surveys of Sunset's 400-acre holdings in the area show an in-place reserve of about 100 million barrels of heavy grade crude, Mr. Sterling noted.

Preliminary results from a pilot water-flooding program started by Sunset two years ago on a 40-acre unit in Placerita indicate substantial increases in operating efficiencies, as well as in production, the company president said.

About two-thirds of Sunset's Placerita holdings are involved in the present water-flooding operations. This property should contain 50 producing wells on completion of the flood program, with an ultimate production of about 1,700 barrels a day, Mr. Sterling said.

Pres. Tully Reports to Reserve Stockholders

Jasper W. Tully, president, Reserve Oil and Gas Co., outlined the 1961 drilling program to Reserve shareholders at the annual meeting held April 17 at the company's San Francisco headquarters.

Tully told the shareholders that increased emphasis will be placed on exploratory drilling. Reserve has programmed and is pursuing the drilling of a number of gas prospects, in addition to oil exploration and development, Tully said.

Locations have been made for two additional gas wells on Liberty Island to extend the new Eocene field discovered by Reserve last December. One of these is presently drilling at 796 feet; drilling of the other will follow immediately, according to Reserve's president.

On the Webb Tract the company has started a well to test the Midland Sand three miles northwest of the Rio Vista gas field.

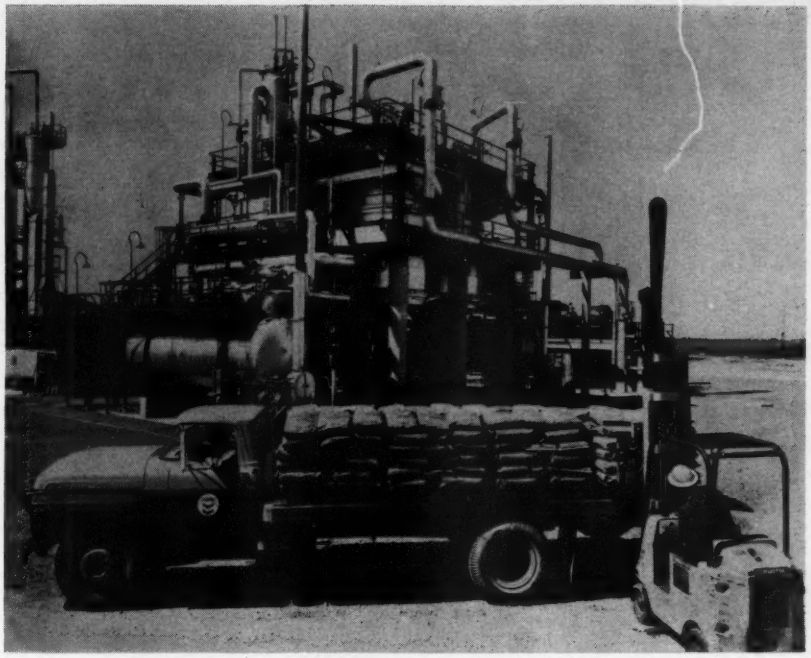
In Kern County, 3½ miles south of Delano, Reserve has started an exploratory gas test scheduled to penetrate below 3,000 feet.

In Wyoming, Reserve has participated in the drilling of two wells this year which were non-commercial and a third well is soon to be spudded. Further drilling is scheduled for this area during the year.

Four wells on the company's Tejon properties are in progress and a fifth is scheduled to begin shortly.

Reserve Oil and Gas Co. production for the first quarter of 1961 was approximately 10 per cent below that for the corresponding quarter of 1960. Operating costs for the same period were reduced about five per cent, according to Tully.

All directors were re-elected during the annual shareholders' meeting and all officers were re-elected at the ensuing organization meeting. They are: Jasper W. Tully, president, director; Max C. Eastman, executive vice president, director; William L. Holloway, vice president, director; Douglas C. Alexander, vice president, director; Ransom M. Cook, director; Clinton LoTourrette, director; Loyd Wright, director; Henry T. Fair, Jr., treasurer; Harold F. Green, secretary; Robert E. Aberley, assistant treasurer; and Scott L. Harrington, assistant secretary.



The Oronite Division of California Chemical Company, a subsidiary of Standard Oil Company of California, shipped the first order of packaged maleic anhydride from its new plant in Richmond, Calif. The new plant, in the background, is the first facility constructed in the West to manufacture the chemical maleic anhydride.

Bechtel Corp. to Build Tidewater's New Avon Plant

Tidewater Oil Company has announced that Bechtel Corp. of San Francisco, Calif., has been selected as prime contractor for the construction of the West Coast's first large commercial Isocracking plant at its Avon Refinery in the San Francisco Bay area.

Construction of the new plant, which will cost in excess of $20 million, begins this month, with completion slated for mid-1962, a Tidewater spokesman said.

The facilities will include a catalytic pretreater unit and an Isocracking unit, each sized at 20,000 barrels per day, plus a 50-million-cubic-foot-per-day hydrogen generating plant, and other auxiliary equipment.

Isocracking is a catalytic hydrocracking process that efficiently converts cracked or straightrun hydrocarbon distillates to over 100 per cent yield of high-octane gasoline. Alternately it can be used to produce gasoline, plus top quality jet fuel, burner oil, or high-cetane diesel fuels of low pour point.

Isocracking products have uniform high quality and are free of sulfur, nitrogen and olefins.

The new process will be licensed from the California Research Corporation.

Keenan Pipe & Supply Co. Appointed Clayton Valve Distributor

Appointment of Keenan Pipe & Supply Co. as a full-stocking distributor for California, Arizona, Nevada and Colorado for the complete line of Clayton Automatic Valves, made by Cla-Val Co. of Newport Beach, Calif., has been announced by P. T. Keenan, president. These valves are made in a wide variety of sizes and types for use in many industries. Stocks will be maintained by Keenan in Los Angeles, North Hollywood, Bakersfield, San Bernardino, San Diego, Las Vegas, Tucson, Phoenix, and Denver. Descriptive bulletins and catalog sheets on Clayton Valves are available at any Keenan location.

Keenan also stocks many thousands of items in all its branches of other well known lines, including the following: National Tube Oil Country Tubular Products, National Tube Welded and Seamless Pipe, Crane Steel, Iron & Brass Valves, Crane Plumbing and Heating Equipment, Ladish Welding Fittings, Reznor Heaters, Sunroc Water Coolers, Ridgid Tools, and many others.

Personalities IN THE NEWS

Mason Hill Elected 45th President of A.A.P.G.

Mason L. Hill, Los Angeles, manager of exploration for Richfield Oil, has become the 45th president of the American Association of Petroleum Geologists. Hill took over as president of A.A.P.G. at the conclusion of the association's annual convention held in Denver recently.

Hill succeeds **Ben H. Parker,** Frontier Refining, Denver, who joined the executive committee as past president.

J. Ben Carsey, Humble Oil & Refining, Houston, is the new vice president of A.A.P.G., which is the world's largest geological organization. **George V. Cohee,** U. S. Geological Survey, Washington, D.C., is secretary-treasurer, and **Grover E. Murray,** Louisiana State University, Baton Rouge, is editor. Both the latter officers were re-elected to their respective positions.

New officers of the Society of Economic Paleontologists and Mineralogists, which held its annual convention concurrently with that of A.A.P.G., as is customary, have assumed command of their organization. **Laurence L. Sloss,** Northwestern University, Chicago, heads S.E.P.M. **Kenneth E. Lohman,** U. S. Geological Survey, Washington, D.C., is new vice president, and **Lloyd C. Pray,** Ohio Oil, Denver, becomes secretary-treasurer. Sloss succeeds **William M. Furnish, Jr.,** as head of this organization.

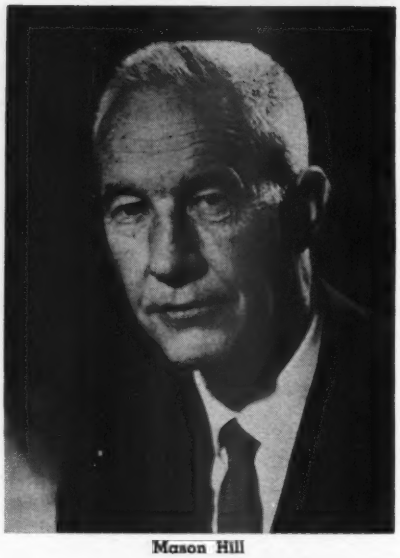
The joint convention of the two societies will be held March 26-29, 1962, in San Francisco. Theme of that meeting will be "Circum-Pacific Petroleum Exploration."

R. L. Davidson Joins Nalco Chemical Co.

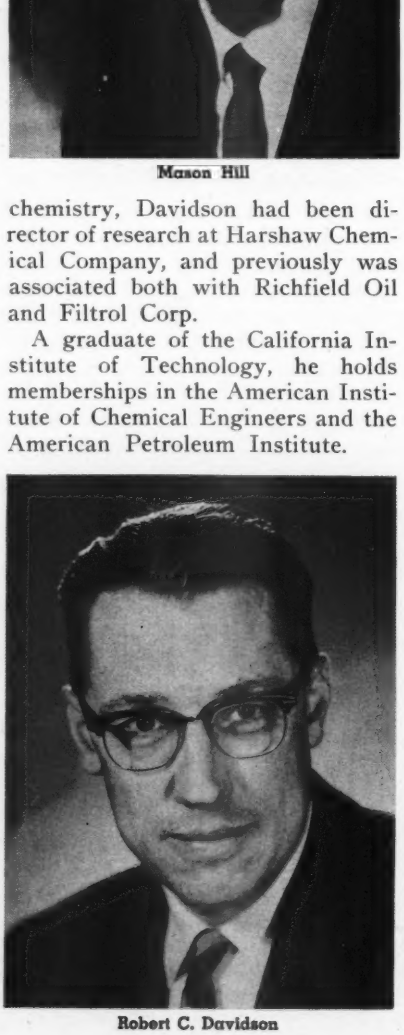
Robert C. Davidson has been named technical director of the Catalyst Division of Nalco Chemical Company, Chicago.

A 22-year veteran in catalyst chemistry, Davidson had been director of research at Harshaw Chemical Company, and previously was associated both with Richfield Oil and Filtrol Corp.

A graduate of the California Institute of Technology, he holds memberships in the American Institute of Chemical Engineers and the American Petroleum Institute.



Mason Hill



Robert C. Davidson

Alan Morazzani Promoted to Presidency of Johnston Testers, Inc.

The appointment of **Alan Morazzani** to the presidency of Johnston Testers, Inc., has been announced by **W. J. Gillingham,** president of Schlumberger Well Surveying Corporation and chairman of the board of Johnston Testers.

Mr. Morazzani has been Southwest Area manager for Schlumberger since 1959, making his headquarters in Houston. He joined the organization in 1935 after graduation from the Ecole de Arts et Metiers in Paris, serving first in Venezuela.

Moving to the United States in 1937, he worked as an engineer for the company in several Texas and Louisiana locations.

Previous management posts which Mr. Morazzani has held include division manager at Midland, Texas; area manager at Evansville, Indiana; and Rocky Mountain Area manager at Denver, Colorado.

In becoming president of Johnston Testers, Mr. Morazzani succeeds **D. C. McCann,** who has moved to the staff of Schlumberger, Limited, in Houston.

J. G. Evans Promoted by Du Pont

The appointment of **Joseph G. Evans** as assistant manager of tetraethyl lead and planning for Du Pont's Petroleum Chemicals Division has been announced by the company, effective April 17.

He succeeds **Robert M. Glover,** who is being transferred to the company's "Freon" Products Division. Mr. Glover will become manager of the "Freon" Division's Western district office on September 1.

Evans has been manager of the Petroleum Chemicals Division's Cleveland district office for the past year and a half. Following his move to Wilmington, activities of the Cleveland office will be coordinated with the Central regional office in Chicago, of which it is a part.

Four Given New Posts By Universal Oil Products

Four Universal Oil Products Co. chemists and engineers have been promoted in an expansion of UOP's chemical products department activities, **Marcus R. Schrein,** senior vice president, announced.

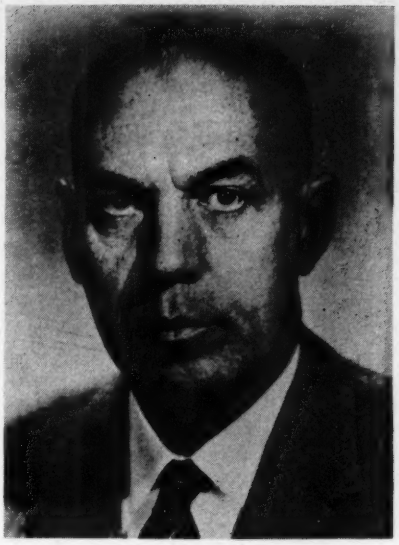
Leonard J. Daniels, Jr., has been appointed head of catalyst sales. **Alfred E. Hoffman** has been named assistant manager of chemical product sales. **William K. Hunter** has been promoted to manager of chemical product development. **Robert P. Zimmerman** has been named research coordinator, chemical products research.

Daniels joined UOP in 1951 and has been a sales engineer in the catalyst sales department since 1960. He received a bachelor of science degree in chemical engineering at Georgia Institute of Technology in 1949.

Hoffman, a graduate of the University of Chicago, was a UOP analytical and research chemist from 1936 to 1950, when he became a chemical products sales engineer.

Hunter joined UOP in 1947 after graduation as a petroleum engineer at Colorado School of Mines. After pilot plant, service and engineering research and development work, he became manager of catalyst sales in 1959.

Zimmerman has been a UOP chemist since 1941 and received a master's degree in chemistry at Illinois Institute of Technology in 1950. In 1956 he was appointed associate research coordinator in the chemical products research department.



C. D. Borland, Jr.

Key Staff Changes Announced in Gulf Oil's Production Organization

E. W. Brake, production manager for Gulf Oil Corporation's Denver District, has been transferred to Midland, Texas, to fill the same position there.

He is succeeded in Denver by **C. D. Borland, Jr.,** formerly production manager of Gulf's Sand Hills (Tex.) Area.

Borland, in 24 years with Gulf, has served the company in various engineering capacities in Oklahoma, Kansas, Illinois, New Mexico and Texas. A graduate of Pennsylvania State College, he has a B.S. degree in petroleum and natural gas engineering. He is in charge of Gulf's production operations in the Rocky Mountain and Pacific States.

Warren C. Johnson Retires From Standard Oil Co. of Calif.

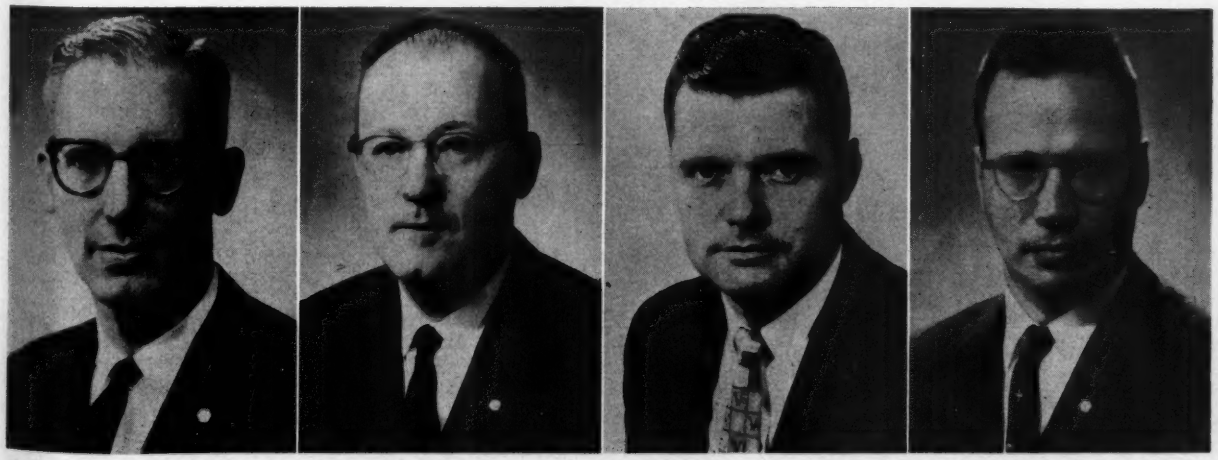
Warren C. Johnson, manager, Southern Division, Producing Department, Standard Oil Company of California, Western Operations, Inc. retired May 1 after forty-five years of service with the company.

Johnson joined Standard in 1916 as an engineer-draftsman. He served in the Navy's submarine service during World War I, returning to the company at Whittier as an engineer. Subsequently he held various positions in the company's California Producing operations until his appointment to the position of manager, Producing Department, Southern California, in May, 1951. In recent years Johnson has played an active part in the development of offshore production at Summerland and Gaviota for Standard and Humble Oil & Refining Company joint operations.

He was appointed president of the Lomita Gasoline Company of Long Beach in July, 1960, a position he currently occupies.

He is a member of the Wildcat Committee, Western Oil and Gas Association; member of the American Petroleum Institute's Advisory Committee, Pacific Coast District; vice president of the Long Beach Oil and Development Company; a member of the National Advisory Council, Offshore Operation; of the board of directors, R. M. Pyles Boys Camp and of the Petroleum Production Pioneers.

Johnson will be succeeded by **J. T. Crooker,** formerly district superintendent, Anchorage, Alaska.



Leonard J. Daniels, Jr. | Alfred E. Hoffman | William K. Hunter | Robert P. Zimmerman

NEW LITERATURE

New Literature Available— McCullough Frac-Notch and Triple Frac-Notch Cutters

Utilizing an improved single-plane entry method of fracture initiation for hydraulic fracturing is described in a new 4-page bulletin, Technical Service Report, T-4101. It illustrates a new cutting process used by these tools to cut and fracture the formation on a horizontal plane as much as 15" deep outside the casing. Concentration of subsequent hydraulic fracturing power in the notched and fractured area results in the application of enormous power horizontally against the formation.

Copies of this new, descriptive literature may be obtained from McCullough Tool Company, 5820 South Alameda Street, Los Angeles 58, California.

Youngstown's Extreme Line Casing Described in Fact-Packed Brochure

The Youngstown Sheet and Tube Company's orange band Extreme Line casing is described and illustrated in a colorful new brochure.

Available in sizes from 5½" to 9⅝" O.D., the casing is designed for deep, high pressure wells. It has a smooth external upset smaller than API couplings to permit good clearance in tight holes.

Dimensions and performance properties of Youngstown's Extreme Line casing are clearly described in a two-page, easy-to-read chart. It is made in three grades—J-55, N-80 and P-110. Integral joints are 20 to 35 per cent stronger than API long T&C.

The brochure is available from Youngstown's distributors or may be obtained by writing Advertising Department, The Youngstown Sheet and Tube Company, Box 900, Youngstown, Ohio.

Continental-Emsco Publishes New Slim-Hole Pump Bulletin

A new bulletin on D+B slim-hole subsurface pumps, designed for 1¼", 1½" and 1¾" nominal ID tubing is now available from Continental-Emsco Company.

Bulletin describes standard pump assemblies, including tubing size and pump bore, type of pump, and material used in barrel tube, plunger, cages and balls and seats.

Also included in Continental-Emsco's new bulletin is stroke length data, seating shoe, nipple and ring specifications, and D+B slim-hole pumps and tubular specifications.

For copies of the bulletin write Continental-Emsco, Advertising Department, P. O. Box 359, Dallas 21, Texas.

A.A.P.G. Luncheon Meeting

Burdett R. Harrison, resident manager, Crowell, Weedon and Co., addressed the regular luncheon meeting of the Pacific Section, A.A.P.G. The topic for Mr. Harrison's talk was "That Hole in Your Pocket." A question and answer period followed.

The luncheon was held May 4 in the Rodger Young Auditorium, Los Angeles.

Texaco Reports Record First-Quarter Earnings

Consolidated net income of Texaco Inc. for the first quarter of 1961 was the highest of any such period in the Company's history, Augustus C. Long, chairman of the board, announced to stockholders at Texaco's annual meeting.

Net income for the three months ended March 31, 1961, was $108,141,171, or $1.75 a share, compared with $97,313,051, or $1.61 a share, in the first quarter of 1960. This was an increase of 11.1 per cent.

Richfield Oil Co. 1960 Annual Report

Richfield Oil Corporation reports net earnings in the Annual Report issued to stockholders of $28,719,936 for the year 1960, equal to $7.11 per share. This compares with net earnings of $28,058,104, equal to $6.95 per share in 1959. Income per share is based on the average number of shares outstanding for each period, which was 4,039,037 in 1960 and 4,036,614 in 1959.

The corporation established new high records in 1960 in crude oil production, refinery runs, refined product sales and petrochemical sales, President Chas. S. Jones noted in his letter to stockholders accompanying the Annual Report.

U.S. Oil Production Capacity

The domestic petroleum industry's capacity to produce crude oil and natural gas liquids reached a record 10,933,000 barrels daily last January 1, according to a report by the Independent Petroleum Association of America.

Productive capacity for all petroleum liquids increased 258,000 barrels daily, or 2.4 per cent, during 1960. Crude oil producing capacity increased 184,000 barrels daily and natural gas liquids capacity 74,000 barrels daily.

Actual production of petroleum liquids as of January 1 totaled 8,209,000 barrels daily, indicating the industry on that date had an idle or unused producing capacity of 2,724,000 barrels daily.

This unused capacity, shut in for lack of market, represented 24.9 per cent of the industry's total productive capacity, said a report by IPAA's productive capacity committee, made at the organization's mid-year meeting here.

The 184,000-barrel gain in crude oil producing capacity in 1960, said the committee, compares with yearly increases of 52,000 barrels a day in 1959 and 163,000 barrels daily in 1958.

This growth in petroleum availability was achieved, said the committee, through exploration and development activity as well as "continuing advances" in oil producing and recovery techniques.

"Productive capacity" was defined by the committee as "the average rate of production from existing wells that could be maintained for a period of from 6 to 12 months without further development and with no significant loss in ultimate (petroleum) recovery."

The estimates of producing capacity, made on the basis of data from industry and government sources, "provide a reliable indication of the current availability of crude oil and natural gas liquids in the United States," the committee said.

It was the seventh annual estimate of U. S. petroleum productive capacity made by the IPAA committee. The report shows 1961 capacity had increased 2,363,000 barrels daily since January, 1954, date of the committee's first estimate.

Summary of District V Oil Industry Conditions February (and March preliminary) 1961

By OIL PRODUCERS AGENCY OF CALIFORNIA

Highlights

The U. S. Bureau of Mines reports an almost unbelievable occurrence, in view of the history of the District V oil industry, that took place in February:

101,000 b/d of residual fuel were imported.

These imports—2,824,000 barrels for the month—are quietly noted in the Bureau's report as "an all-time high." They are. They have risen from nothing prior to 1960 to 18,000 b/d in that year to a two-month average of 63,000 b/d in 1961.

An explanation is in order: It is that, since there is no District V quota for imported residual fuel except a modest one of approximately 4,000 b/d held by the military, any such imports must be bonded. This means, in turn, that they can be used only as fuel for vessels in international trade and, under the present import program, that trade is not accounted for as part of demand, hence does not add to the District V import quota.

The significance of these imports is, however, that for the first time in the history of the District V industry (except in time of emergency), the current indigenous supply of residual fuel appears to be insufficient to meet requirements.

Stocks at the end of February were only 13,949,000 barrels, down 20,000,000 barrels from their recent high of October, 1958, and down 2,700,000 barrels from the level of February, 1960.

Even with imports of 2,824,000 barrels in February, primary residual stocks increased only 204,000 barrels during the month.

A decrease in crude stocks was sufficient to offset all other increases, with the result that total stocks decreased 787,000 barrels during the month.

Total Supply, Demand, and Stocks

Preliminary figures for March indicate that total supply was 1,450,000 b/d, demand was 1,408,000 b/d, and stocks increased 42,000 b/d. This increase, 1,302,000 barrels for the month, would bring stocks to 116,020,000 barrels on March 31, compared with 119,441,000 on March 31, 1960. The year's decrease would be 3,421,000 barrels.

Crude Production, Imports, and Stocks

Weekly figures for March indicate that crude production was 839,000 b/d, imports were 332,000 b/d, and stocks increased 79,000 b/d. This increase, 2,449,000 barrels for the month, would bring stocks to 32,490,000 barrels on March 31, compared with 33,821,000 on March 31, 1960. The year's decrease was 1,331,000 barrels.

Gasoline Supply, Demand, and Stocks

Preliminary figures for March indicate that gasoline supply was 563,000 b/d, demand was 558,000 b/d, and stocks increased 5,000 b/d. This increase, 155,000 barrels for the month, would bring stocks to 32,812,000 barrels on March 31, compared with 35,411,000 on March 31, 1960. The year's decrease was 2,599,000 barrels.

Distillate Fuel Supply, Demand, and Stocks

Weekly figures for March indicate that distillate supply was 185,000 b/d, demand was 223,000 b/d, and stocks decreased 38,000 b/d. This decrease, 1,178,000 barrels for the month, would bring stocks to 14,135,000 barrels on March 31, compared with 11,936,000 on March 31, 1960. The year's increase was 2,199,000 barrels.

Residual Fuel Supply, Demand, and Stocks

Preliminary figures indicate that residual supply was 309,000 b/d, demand was 302,000 b/d, and stocks increased 7,000 b/d in March. This increase, 217,000 barrels for the month, would bring stocks to 14,166,000 barrels on March 31, compared with 15,279,000 on March 31, 1960. The year's decrease was 1,113,000 barrels.

Natural Gas Supply, Consumption

In February, consumption of natural gas was 3,690,000 mcf per day. Out-of-state supply was 2,389,300 mcf per day; California supply was 1,301,300.

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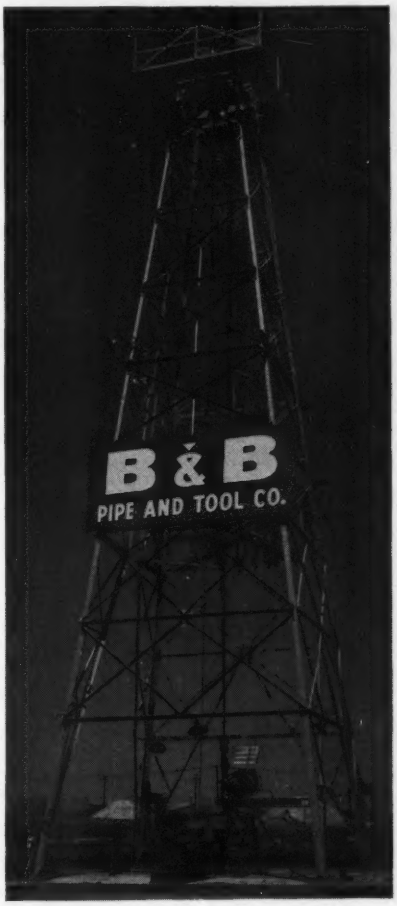

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FOREIGN OPERATIONS
WEST COAST OIL COMPANIES

Arabian Gas Injection Plant

A new liquid petroleum gas injection plant is being built at Abqaiq, Saudi Arabia, by Arabian American Oil Co. (Standard of Calif. 30%). Scheduled for completion October 1, 1961, the plant will collect and compress 55 million cu. ft. per day of low-pressure gases and prepare them for injection in the North Dome of the 'Ain Dar Reservoir.

This is part of the company's program to conserve gas and increase recoverable oil reserves.

The LPG plant will provide facilities for injection of raw LPG at the rate of 37,000 bbl. per day. This daily total will be mixed with high-pressure gas from the 'Ain Dar gas injection plant and will provide "critical enrichment" of the high-pressure North 'Ain Dar Dome injection gas.

New Libya Mobile Drilling Rig

Camdrill International Inc. has taken delivery of the Desert Star No. 3, a completely mobile drilling rig designed for operations in the North African desert of Libya.

The rig consists of four large off-road trailer units which carry all the drilling equipment. One of these is said to be the largest drilling rig trailer ever developed, weighing 186,000 lbs. It is mounted on eight 21.00x25 desert tires.

The rig is designed to drill to 9000′ with a 4½″ drill pipe.

A special feature of this rig is that all six of its Caterpillar diesel engines have been engineered to burn a wide variety of crude oil. This results in important savings in transportation and fuel costs.

This is the third Desert Star rig put into operation by Camdrill. The two previous rigs are operating successfully in Libya and are demonstrating that a substantial savings in moving and rig-up costs can be realized with mobile equipment.

Desert Star No. 3 arrived in Libya in early April and is drilling for Esso Sirte of Libya.

Santa Fe Drilling Co.

Perhaps the most widespread operation of any locally based drilling contractor is disclosed in a round-up of the world-wide activities of Santa Fe Drilling Co. In fact it is desirable to divide listing of the operations between Eastern and Western Hemispheres in order to keep track of them.

Eastern Hemisphere — In Iran, four rigs working for the Consortium in the Gach Saran field, drilling is under a labor contract. (Contractor furnishes personnel.)

In Libya, three rigs operated by Santa Fe and one under labor contract, wells being drilled for American Overseas, Gulf, Mobil and Oasis. In Burma, one rig on the Irawaddy delta under labor contract.

In the Philippines, one rig at present idle.

On the West Coast of Africa, in Cabinda, north of the Congo, one wildcat drilling.

Western Hemisphere—In Colombia, two Santa Fe operated rigs and one under labor contract, all drilling for the Mecom interests.

In Peru, one labor contract offshore with Peruvian Pacific.

In Northern Chile, one rig drilling for the government, perhaps the highest elevation of any drilling rig in the world today, 11,500 feet. This is a wildcat. In Southern Chile, five rigs under labor contract with the government near Straits of Magellan. This is development work and involves whipstocking under the Straits.

In Venezuela, two rigs for Texaco and one for Atlantic.

Offshore Trinidad, three rigs, Trinidad Northern Area (Texaco, British Petroleum and Shell).

Kellogg Overseas Corp.

This contractor is engaged in a most interesting and unique operation in Greece for Esso Helenic Inc. The first of several wildcat wells was spudded in early February on the Island of Zakynthos near the town of Zante. After this initial well is completed there will be other tests in the southwestern portion of Greece and on the offshore islands.

An interesting feature of the operation is the nationalities involved. There are seven men from the United States, two Danes and four Italians, in addition to the Greek nationals. The Italians have shown a special aptitude as derrickmen.

Kellogg also furnished a crew under labor contract with Bahrain Petroleum for a development well on the Island of Bahrain, which is off the East Coast of Saudi Arabia. This job was completed in mid-April of this year.

Haney & Williams Drilling Co.

The current foreign operations of this well known contractor are in Brazil. This work, which is for Petrobras, the Brazilian government company, has been going on continually since December, 1956.

Three rigs are at present drilling in the States of Algoas and Sergipe. Two of these three rigs have Brazilian drillers and American pushers, while the third crew consists entirely of Americans.

During the 4½ years that Haney & Williams have been operating in Brazil, they have drilled some 25 or 30 wells. Some of these wells have been shallow but many have been drilled to a depth of 6000′ to 9000′. While indications of the presence of oil have been found, this potential production is of a marginal nature. Thus the work is considered still exploratory.

All these wildcats have been located in the Algoas-Sergipe area where the current drilling is going on.

Haney & Williams completed during 1960 the offshore drilling they were doing in Ecuador for Standard.

LIBYA AND AMOSEAS
(Caltex—50% Standard of Cal)

(Summarized from Caltex publication "Oil, Lifestream of Progress" 2nd quarter 1961.)

From 600 B.C. until ten years ago the story of Libya had been one of repeated conquest and dismemberment. Romans, Vandals, Byzantines, Arabs, Normans and Spaniards all came, held sway and departed.

The provinces of Tripolitania and Cyrenaica were first united under Roman rule after the fall of Carthage in 146 B.C. Today with the addition of the vast southwestern desert of the Fezzan they are again united, this time as an independent nation—The United Kingdom of Libya. Their independence was proclaimed on December 24, 1951.

Today's explorers—globe-girdling oil geologists and their staffs—come only to find and develop a vital natural resource. They come to uncover the secrets that lie beneath Libya's ancient sands.

Among these latter-day explorers are the geologists of American Overseas Petroleum Ltd. These men are already veteran explorers in many different lands, but perhaps they look upon the Libyan venture as just a little bigger and more challenging than the assignments with which they are more familiar.

Libya published its laws relating to petroleum exploration in 1955. In December of that year Amoseas was granted six widely separated concessions in Tripolitania and northern Cyrenaica. Two more concessions were granted in the following two years, one in central Cyrenaica and one in the vast southern desert of the Fezzan.

In these five years, various concession holders, including Amoseas, have discovered some ten or more fields which are capable of producing oil in commercial quantities. How big or how important these fields are will not be known until the reservoirs can be delineated—a long-term and costly study.

Tripoli, which today as in the days of Marcus Aurelius is Libya's principal port, was chosen by Amoseas as its base of operations. It is to Tripoli that rock specimens and ore samples come from exploration sites deep in the desert, for microscopic analysis. It is at Tripoli that the tons of specialized equipment such as drilling rigs, broad-tired Land Rovers vital to desert transportation, and other equipment and provisions are unloaded for transshipment to remote desert outposts.

At the outset it was obvious that each exploration team, with its vehicles and equipment, had to be a completely self-contained and self-sufficient unit, with radio contact with headquarters.

In spite of all planning and precautions, dire emergencies occasionally occur, which are usually overcome through the use of the Siamese twins of desert survival, a gallon container of water and a signal mirror.

Today, Amoseas' hard working exploration teams are served by regular flights of the company's Douglas DC-3 and look forward anxiously to its arrival with newspapers and letters from home, fresh refrigerated food and often a replacement geologist or skilled mechanic.

From the plane the newcomer first sees a tiny speck in the limitless desert. Quickly it grows and is soon discernible as several specks and finally a busy camp.

Upon reaching camp the new crew member may find desert life a good deal less uncomfortable than he had expected. If he is a field geologist, he is based in a tent camp, but many members of the seismic and drilling crews live and work chiefly in air-conditioned trailer camps. These neat units create a tiny but efficient working community in the desert's immensity and, when the day's work is done, help to shut out any sense of isolation.

Though Libya has an area of 680,000 square miles, more than six times the size of Great Britain, only about 5% is at all productive agriculturally. And even these portions close to the Mediterranean suffer from the hazards of uncertain rainfall and the scorching ghibli, the hot, dry wind which blows northward out of the Sahara, searing all that lies in its wake.

Thus the great importance of this oil development in the desert in the future of the new kingdom is obvious.

It may be that Libya will never again attain the splendor and importance it enjoyed when it was the center of the Roman Empire's African domain.

But Libya today has something of greater value than it has ever had through its long history, its independence as a free nation.

There is also reason to be confident that the oil discovered beneath these desert wastes by Amoseas and others will before long be the instrument of economic developments undreamed of when that independence was won.

Chemical Plant for India

License for construction of a proposed $55 million complex fertilizer plant on the East Coast of India has been granted by the Indian government to California Chemical Company and two other participating companies, according to word received here. Cal Chemical is a subsidiary of Standard Oil Company of California.

Fred Powell, Cal Chemical president, said the proposed plant is designed to produce about 350,000 tons of chemical fertilizers annually. Although the venture has been under consideration for some time, receipt of the Indian government license was necessary before feasibility studies on the plant could be completed by Cal Chemical and its partner companies, International Minerals and Chemical Corporation of Skokie, Ill., and the E. J. D. Parry Group, Madras, South India.

Present plans call for construction of the facility in the Indian port city of Visagapatnam, near a Caltex oil refinery there which will supply some of the major ingredients used in the fertilizer manufacturing process. Caltex is a Standard of California affiliate.

Powell said that private Indian stockholders would be invited to participate in the venture. The American companies will be minority stockholders in an Indian company which will be established to own and operate the plant.

Completion of the Visagapatnam project is scheduled to coincide with the third year of India's current five-year plan, in which principal emphasis is on food production. To feed a population which is expected to reach 500 million by 1966, India has taken urgent action to improve its food production capacity, Powell indicated.

"It is generally agreed that fertilizer is the key in such a program," he said.

Union Finds Oil in Australia

Reese H. Taylor, chairman of the board, Union Oil Company of California, confirmed reports Union Oil and its partners had found oil in Queensland, Australia, but emphasized it was too early to determine if the well would prove to have commercial possibilities.

"We are continuing to test the well," said Taylor. "Data are still inconclusive and the potential cannot be accurately assessed until production tests are completed. Further testing is necessary.

"When accurate news is available it will be made public."

Union's partners in the Queensland exploration program are the Kern County Land Company and Australian Oil and Gas Corporation. Union is manager-operator of the venture.

The three partners hold exploration rights to 60,000 square miles in southwest Queensland and north New South Wales and 12,300 square miles in north New South Wales.

Shaffer Announces New "3-in-1" Hydraulic Jar and Safety Joint

Shaffer Tool Works has announced development of a revolutionary new type of fishing jar, which combines the advantages of a straight-pull hydraulic jar, a straight-pull mechanical jar (as "standby"), and the controlled re-

Shaffer hydraulic trip jar safety joint.

leasing action of a positive safety joint in the event the fish cannot be freed and it is desired to release the fishing string.

This is the first time that a tool combining such a wide range of safety features has been available to the oil industry. The tool has been fully field-proven under a wide range of field conditions and at various depths.

Under normal operations, the new tool, known as The Shaffer "Hydraulic Trip" Jar Safety Joint, is used as a straight-pull hydraulic jar, with the force of the blow easily controlled at the surface. The operator simply takes a pull on the fishing string.

Then, by simply lowering the string, the tool is re-set for another blow.

In designing the hydraulic system a large diameter bore has been maintained throughout the tool to assure ample fluid circulation and the free passage of wire line equipment.

Also, all operating parts in the tool are completely sealed in oil to prevent abrasive mud, sand and corrosive well fluids from contacting the operating mechanism.

A unique feature of the Shaffer "Hydraulic Trip" Jar Safety Joint is the provision built into the tool for operating the jar mechanically should the hydraulic mechanism, for any reason, fail to operate.

Still a further safety feature built into this new Shaffer tool is the fact that, should the fish not be jarred loose, the operator can simply trip the tool, then lower the string slightly as left-hand torque is maintained. This rotates locking lugs on the tool into releasing slots, permitting the string and a major portion of the tool to be withdrawn from the well.

The Shaffer "Hydraulic Trip" Jar Safety Joint is available in a complete range of sizes. Full details on this new development can be obtained by writing Shaffer Tool Works, Brea, California.

Dr. Bradley Elected Vice President

Dr. William E. Bradley, director of research for Union Oil Company of California, was elected a vice president recently, it was announced by **Reese H. Taylor,** chairman. Dr. Bradley will continue to direct research.

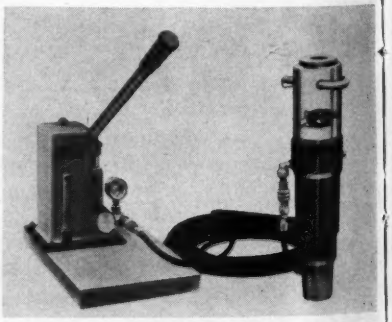
Guiberson Has New Type HS10 Hydraulic Wire Line Stripper

In keeping with its long-established policy of furnishing specialized equipment for the oil industry, The Guiberson Corp., Dallas, Texas, one of the Dresser Industries, announces availability of two new hydraulic wire line strippers for high pressure applications.

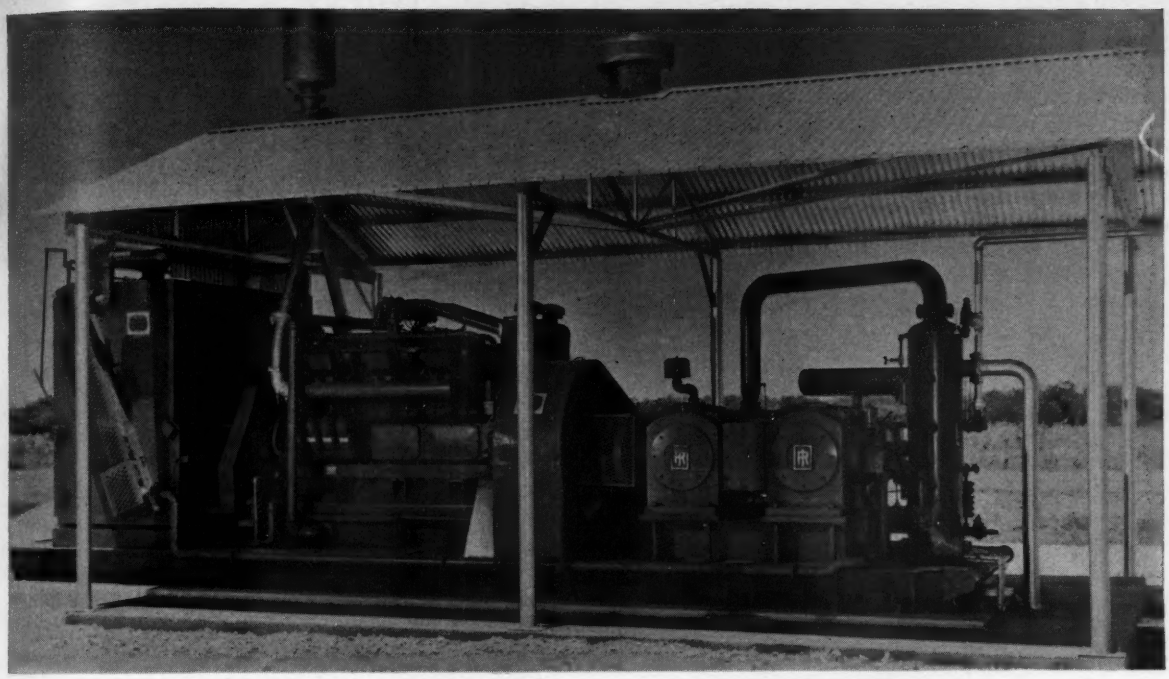
The hydraulic wire line strippers, according to the manufacturer, safely contain the pressure surge immediately following gun perforator explosions and also act as blowout preventers in case a high pressure zone is tapped in perforating. The tool strips mud and other well fluids from the line as it is removed from the well.

Two types are available, the HS5 for pressures up to 5000 psi and the HS10 for pressures up to 10,000 psi. Both types are equipped with hydraulic pump and fifty-foot hose for fast, safe, remote control even when the stripper is mounted well above ground or floor level.

The strippers feature a large, oil-resistant, one-piece rubber packing element of exceptionally long life, and long-life guide bushings which are 2⅜" long made of high-grade, non-sparking bearing material. The body, in which all movement of the bushings, rubber and ram occurs, is made in one piece of corrosion-re-



Guiberson Type HS10 Hydraulic Wire Line Stripper



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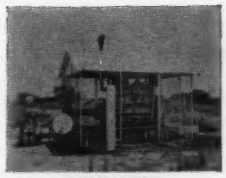

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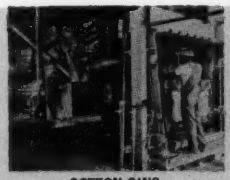
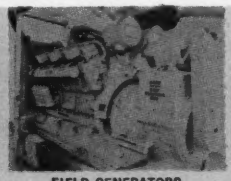


COTTON GINS



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sistant stainless steel. Another outstanding feature of the stripper is the base which is available with 2" EUE 8 Rd, 2½" EUE 8 Rd, or 3" LP 8V field connection; and by merely changing the base, the stripper may be converted to any one of the three field connections. Each complete stripper includes a 50-foot hose and a hydraulic pump of 3000# capacity which is mounted on a heavy wooden base and includes an accurate pressure gage calibrated to 3000#.

Guiberson says these hydraulic wire line strippers may be safely used in gun perforating and other wire line operations with maximum service at minimum cost.

For more information write to D. L. McGill, The Guiberson Corporation, 1000 Forest Street, Dallas, Texas.

Dowell Introduces New Oil Friction Reducing Agent

A new oil friction-loss reducing agent known as J105 has been developed by the Dowell Division of The Dow Chemical Company, according to R. E. Hurst, manager of technical service.

Field tests show that small quantities of J105 added to the oil reduces friction loss from 30 to 70%, depending on the pump rate, pipe size, viscosity and fluid density. For example, a recent test in a 6000-foot well with 2½" tubing, pumping 32 degree API gravity crude oil at 10 barrels per minute, the friction pressure without J105 was 3600 pounds per square inch. With the addition of J105 at the same pump rate, the friction pressure was reduced to 2160 pounds per square inch—a savings of 350 hydraulic horsepower.

The product reduces friction loss by suppressing turbulence and should be effective whenever the turbulent flow of oil is encountered. Turbulence is usually prevalent in pumping low-viscosity oils or oils of any viscosity at high pump rates.

The research and development of J105 supplements Dowell's J100, which is a water friction-loss reducing agent. Both products are the result of chemical research to find means of reducing the loss of hydraulic horsepower between the pumps on the surface and the pay formation in the wells to be serviced.

Special Hydraulic Presses Installed at B &W for Production of Well Completion Equipment

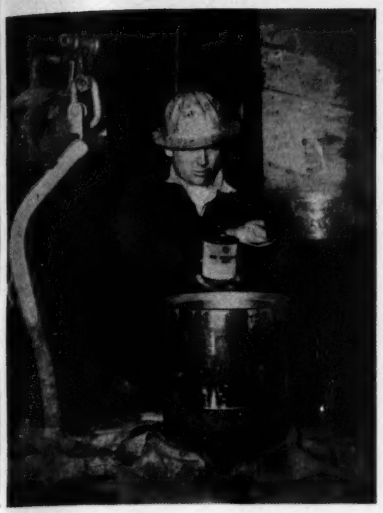
B & W Incorporated announces the installation of two additional hydraulic presses at its Torrance, California, facility. The installation of these large presses, according to B & W, is part of its continuing program to use special machinery and modern manufacturing techniques in obtaining greater strength and durability for its line of well completion equipment.

The two presses were recently delivered and installed at B & W by an experienced crew using a large crane with a 150-ton lifting capacity. This crane lifted the presses directly into position and placed them on specially prepared foundations. This particular job was of such a specialized nature that the foreman of the crew was called out of retirement by Pacific Crane Company to handle the installation because of his qualification for this type of work. B & W engineers worked with the installation crew, setting up the presses and readying them for production. Both presses are now in operation and being used to cold forge many of the die-formed components that go into B & W products.

One of the presses is a 350-ton, double-acting Bliss weighing 95,000 pounds. It stands 19 feet from top to bottom and is 9 feet wide. This press will serve as a back-up to a special 330-ton, triple-action press that was designed and built by B & W engineers four years ago and has been in continuous operation since that time. B & W indicated that the combination of these two presses will add to its technique of forming a total unit from one blank, as opposed to the methods used by other manufacturers of fabricating and assembling, by hand, a large number of pieces to make a single unit.

The other new press installed at B & W has a 500-ton capacity with an 18" stroke. It weighs 58,000 pounds and has a platen area large enough to set a small compact automobile on it. The B & W Research and Development Section states this 500-ton press will enable the company to cold forge larger pieces, from heavier-gage materials, into shapes and sections that will add greater structural strength and durability to its product line.

Two additional hydraulic presses installed by B & W at Torrance, California, plant.



NEW HIGH STRENGTH ADHESIVE — After liquid hardener has been mixed thoroughly with epoxy paste, Epon® "Pipelock" 924 is ready for use when its normal gray color changes to red. Here, worker uses putty knife to spread adhesive in thin layer completely around casing threads. Coupling threads are coated in a similar manner. After casing has been screwed into collar, string can be lowered without delay. The adhesive is produced by the Adhesives Department, Shell Chemical Company, Pittsburg, Calif.

New High Strength Adhesive Joins Casing Permanently

Epon® "Pipelock" 924, an epoxy adhesive with a breakout torque of over 7000 ft. lbs. on a 2⅞-in. tubing joint (24-hour setting time), has been introduced by the Adhesives Department, Shell Chemical Company, Pittsburg, Calif. It was developed especially as a substitute for welding on surface casing joints in order to prevent the casing from backing off while being drilled through. The new adhesive joins and seals all steel pipe joints, hardens in a short time and is resistant to high temperatures, salt water, steam and mud. Field-tested successfully in production wells, the adhesive is used primarily to replace spot-welded connections on the bottom joints of casing strings. As a result, it can reduce drilling costs by eliminating the need for welding time, labor and equipment.

Pipelock consists of a gray paste and a liquid hardener which are mixed together just before use. The two parts are pre-packaged in exact amounts to simplify field preparation. Two special advantages of the adhesive are: (1) it can be blended easily at temperatures as low as 0°F; (2) when paste and liquid have been mixed properly, the adhesive turns red. It will then stay soft and usable for up to 40 minutes at 70°F and should be used within that time.

Application of the adhesive is very simple. Both casing and collar threads are first wire-brushed and wiped with solvent to remove dirt. The mixed adhesive is then spread with brush, trowel or putty knife in a thin layer to the depth of the threads. Well-string can be lowered into the hole immediately after pipe section has been screwed into collar. Heat is not required to harden the adhesive.

Dowell Shops in Tulsa Equip Huge Service Trucks For Sahara Desert Duty

The Dowell shops in Tulsa are equipping four huge oil field cementing and fracturing service trucks for Sahara field duty. This service equipment will be operated by an associate company, Dowell Schlumberger. Two of these trucks previously equipped by Dowell in Tulsa are now in service in North Africa.

The all-wheel-drive truck chassis, on which the service equipment is being mounted, was designed by the International Harvester Company in cooperation with Dowell engineers. These trucks are 9.5 feet wide, 8 feet from the ground to the top of the radiator and 34 feet from front to rear. Each special desert tire weighs 500 pounds and a hoist installed on the truck is required for the loading and unloading of the spare tire. The truck with all service equipment installed weighs 60,000 pounds.

The truck is powered by a Detroit Diesel 350-horsepower V8 engine. This engine also furnishes the power to operate one of the two Dowell triplex pumps mounted on the chassis. The second pump is powered by another 350-horsepower V8 diesel engine mounted on the truck deck. The power from the engines is transmitted to the pumps through a torque converter and transmission. Each pump is capable of handling pressures up to 10,000 pounds per square inch and may be operated simultaneously.

The trucks are equipped with oversized cooling systems to maintain satisfactory cooling of the engines running at full throttle in desert temperatures up to 125 degrees.

A control panel mounted on each truck permits the service engineer to direct all operations from a central point. Each unit is fully equipped with fittings, connections and hoses for making the hookup to the well head.

Oilwell Cementing and Fracturing Service Truck designed and assembled by Dowell for desert service.

Mrs. Frances King

D & D Regional Meeting Held in Santa Barbara

The Regional Meeting for Region VIII, Association of Desk and Derrick Clubs of North America, was held April 28-30 in the Miramar Hotel, Santa Barbara. Oil women from California, Washington, Oregon, Canada and Hawaii attended this convention. Mrs. Frances King, president, headed the group of 35 members attending from the Los Angeles Club.

The featured speaker at the Saturday (April 29) luncheon was Charles R. Dodson, vice president of the United California Bank, Los Angeles. His subject was "Petroleum Banking and Free Enterprise." Director of Region VIII, Mrs. Mary Pancoast, a former president of the Los Angeles club, presided at the business sessions. Mrs. Bettie Conley of New Orleans, president of the Association of Desk and Derrick Clubs of North America, came west for the meeting.

Charles R. Dodson

Bakersfield D & D Selects W. F. Patton Man of Year

Following its yearly custom of selecting The Man of the Year, the Desk and Derrick Club of Bakersfield has chosen William F. Patton for 1961, and in his honor the Golden Derrick Ball was held at the Bakersfield Hacienda on May 13th.

Patton's selection for this honor came about because of his work in behalf of young people and his notable civic contributions. Despite his many business interests, he was one of the key men in building the Kern County Girl Scout Camp on Greenhorn Mountain. Faced with the problem of building a $75,000 camp from a Girl Scout treasury of $4,500, he wound up with a camp valued at $100,000. YMCA fund drives for its summer camp near Jack Ranch have received his unstinted time. He is district vice chairman of the board of directors of the Children's Home Society, southern San Joaquin District which sponsored a Junior Rodeo last month, a fund raising event. A life membership was given him this year by the Parent-Teachers Association of East Bakersfield High School, where he is a member of the Parent Advisory Committee. He has served as chairman of the under-privileged children's committee and the boys and girls work committee of the Kiwanis Club.

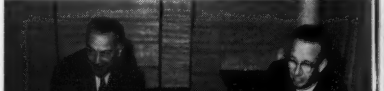
Patton is secretary-treasurer of Miller & York and is interested in various oil companies in California. He is a director of the Independent Petroleum Association of America, a member of the American Association of Oil Well Drilling Contractors, a member of the Bakersfield Petroleum Club, a past president of Kern Philharmonic Orchestra Society, where he served three years as treasurer and was given an Oscar for outstanding service to the group.

James M. McNeill

McNeill Gives Talk at Forum Group of AIME

James M. McNeill gave a talk to the Forum Group of the AIME in the Rodger Young Auditorium on April 17. The subject of the talk was "Observations of an American Oil Man on Working the Middle East."

McNeill was formerly head of operations for the Iranian Oil Exploration and Producing Company commonly known as the consortium. He is now a consulting petroleum engineer in Los Angeles and is associated with Albert Stevenson.



Bill Barbat (seated, right), Standard of California, San Francisco, chaired a planning session in Denver, Colorado, for the 1962 AAPG-SEPM convention to be held in San Francisco March 26-29, 1962. Seated, left, is Berkeley geological consultant Graham B. Moody. Two more Californians on the committee are (standing, left) J. J. Graham of Stanford University and John Kilkenny, Union Oil Co., Los Angeles. The convention next year will be the 47th for the American Association of Petroleum Geologists and the 36th for its affiliate, the Society of Economic Paleontologists and Mineralogists. Theme of the 1962 meeting is "Circum-Pacific Petroleum Exploration" with attendance expected to equal the 4,100 registrants at the recently concluded 1961 convention in Denver.

Report on the P.E.S.A. Annual Meeting

The Petroleum Equipment Suppliers Association has elected W. H. Larkin as president of the Association and W. J. McWilliams as vice president. Both have had outstanding careers in the petroleum equipment industry and have previously served on the P.E.S.A. board of directors.

Larkin is president and general manager of the Larkin Packer Division of the Koehring Co., Waxachie, Texas. McWilliams serves as president of the Republic Supply Co., Oklahoma City, Okla.

Election of new officers was at the Association's Annual Meeting held April 8-12 at The Greenbrier in White Sulphur Springs, West Virginia. Approximately 250 P.E.S.A. members, representing supply and service firms from throughout the United States, were on hand for the West Virginia meeting.

Other business conducted during the four-day session included committee meetings and reports covering such phases of the industry as manufacturing, communications, lien law, finance and labor relations; major addresses by guest speakers John F. Skillman and Joe T. Dickerson; and election of new directors.

Selected to serve as directors-at-large were Frederick F. Murray, Oil Well Supply Division, Dallas; Ted Sutter, Baker Oil Tools, Inc., Los Angeles; F. M. Mayer, Continental-Emsco Co., Dallas; M. B. Jones, The S. M. Jones Co., Div. of Buffalo-Eclipse Div., Toledo, Ohio; D. D. Bovaird, The Bovaird Supply Co., Tulsa; M. E. Montrose, Hughes Tool Company, Houston; Rainey Elliott, Jones & Laughlin Supply Div., Tulsa; Grover Kilgore, Halliburton Co., Duncan, Okla.; Wallace D. Wilson, Wilson Supply Co., Houston; and Elliott A. Johnson, Schlumberger Well Surveying Corp., Houston.

E. S. Dulin, Byron Jackson Tools, Inc., Los Angeles, and J. A. Crawford, The Youngstown Steel Products Co., Los Angeles, were elected directors emeritus.

Pacific District regional directors elected to serve during 1961 are:

Richard M. Chewning, The Republic Supply Co. of California, Los Angeles; H. J. Hagn, Chiksan Company, Brea, Calif.; Harold E. Howard, Howard Supply Co., Los Angeles, Calif.; Arthur S. Marshall, Smith Tool Co., Compton, Calif.; I. J. McCullough, McCullough Tool Co., Los Angeles, Calif.; John B. Merritt, BJ Service, Inc., Long Beach, Calif.; H. H. Peters, Technical Oil Tool Corp., Los Angeles, Calif.; Andrew W. Rose, Byron Jackson Div., Borg-Warner Corp., Los Angeles, Calif; Elmer J. Weis, Pacific Pumps, Inc., Huntington Park, Calif.; and Elvin K. Wilson, Shaffer Tool Works, Brea, Calif.

LARKIN, McWILLIAMS TAKE P.E.S.A. REINS—New president W. H. Larkin (right) and vice president W. J. McWilliams.

600 Attend W.O.G.A. Safety Conference

Rubber stamp approval by top management will not replace sincere and wholehearted support of an over-all safety program, N. N. Jones, acting area manager of the Humble Oil and Refining Company, warned oil men on April 25.

Speaking at the Western Oil and Gas Association's oil industry safety conference at the Lafayette Hotel, Long Beach, Jones told 600 operating management men gathered for the two-day conference that participation on the part of top management does more to build safety than a thousand preachings.

"Eternal vigilance is the key to success in safety," Jones said, "and the manager who practices what he preaches heads the outfit with the best safety record."

L. C. Stevens, vice president, exploration and production division, Mobil Oil Company, and opening speaker at the morning conference session, told oil company representatives that the six "M's" — Men, Materials, Methods, Money, Management and Morale — hold the key to a successful safety program.

GUEST SPEAKER AND INTERNATIONAL GUESTS at the April 12, 1961, meeting of the Los Angeles Chapter of Nomads. Left to right (front row) W. A. Thompson of Alliance Companies, who spoke on India; Erle Hume of Caltex from Sumatra; Lee White of D.M.J.M. from Thailand; H. G. Karnes of R. M. Parsons from Ethiopia; Wm. M. Hendricks, ex-K&C in London; (back row) Forrest Harrell of Camdrill from Libya; J. O. Jackson of Camdrill from Libya; James E. Hooper of Drilexco from Brazil; Albert Jensen of D & E from Portuguese Guinea; Elmer V. Kimble of Haney & Williams from Brazil.

Field Development

LOS ANGELES BASIN

Rosecrans

Nicolai and Clodfelter of Long Beach are preparing to drill an 8000-foot test in the Rosecrans area north and east of the intersection of San Pedro and Compton Blvd. on Section 20-3s-13w.

Studio City Test Abandoned

Barnes Core Drilling Company drilled and abandoned Hollywood Freeway No. 1 located near the intersection of Magnolia Ave. and West Park Drive on the southeast quarter of Section 18-1n-14w. Total depth of the test was not released.

Basin Wildcat Abandoned

Downey Land Company drilled to a total depth of approximately 4000 feet on Downey Land Co. No. 1 and abandoned the test. The well was located on the northeast quarter of Section 15-3s-12w two miles south of the town of Downey and three miles southwest of the Santa Fe Springs Field.

Rosecrans Test Abandoned

W. S. Payne, Jr., deepened Murdock No. 2 to a total depth of 8645 feet and after running logs plugged and abandoned the test. Located near the intersection of San Pedro and Compton Blvd. on Section 20-3s-13w, the well was redrilled and deepened from 6526 feet. A formation test of the interval 8390-8576 feet recovered 350′ of mud, oil and water.

Saugus Area

C. D. Cunningham of Long Beach is planning to drill Macauley-Cunningham No. 2 located near the center of Section 14-4n-16w.

SAN JOAQUIN VALLEY

Kern River Basement Test

Kern Oil California Limited has staked a location for Well No. 33-58X on the southeast quarter of Section 33-28s-28e. Located in the producing area of the Kern River Field, the well will be drilled to the Basement.

Fruitvale Outpost

Artnell Company is grading rig site for Alco-Smoot No. 1 to be drilled on the northwest quarter of Section 28-29s-27e. Artnell's test is 500 feet southeast from present production.

Ten Socony Mobil Wells

Socony Mobil Oil Company, Inc., has staked locations for ten development wells in the San Ardo Field of Monterey County. Hamby No. 138 will be drilled on the southwest quarter of Section 18-23s-11e. Orradre No. 43-11 and 218-11 are located on Section 11-23s-11e, and on Section 12-23s-10e locations have been staked for Orradre Nos. 10-12, 40-12, 42-12, 68-12, 70-12, 72-12 and 96-12. Average depth of the wells will be about 2200 feet.

Kern County Wildcat

Rocky Mountain Drilling Co. is drilling below 5700 feet on Panama Slough No. 78 located on the southeast quarter of Section 9-31s-27e. The well is ten miles southwest of the town of Bakersfield.

Shell Kern County Wildcat

Shell Oil Company is drilling below 3000 feet on KCL No. 24-9 located on the northwest quarter of Section 9-10n-20w. The test is on the Wildflower Anticline and is three miles south of the Wheeler Ridge Field.

Kings County Abandonment

Shell Oil Co. drilled to a total depth of 5012 feet on Shell Unit No. 36-16 and after running logs and tester abandoned the well. The wildcat was located on the southwest quarter of Section 16-21s-19e in the Tulare Lake area.

Phillips Petroleum Wildcat

Phillips Petroleum Company will drill a Kern County wildcat test in the Tejon area six miles north of the Grapevine Field. Location of the 12,000-foot test falls on the southeast quarter of Section 35-12n-19w.

Seven South Belridge Wells

Belridge Oil Company has staked locations for 7 development wells in the South Belridge Field. Wells No. 55S, 56G, 56H, 66J, 66L, 66M and 66S are all located on the southeast quarter of Section 34-28s-21e.

Kern Front Test

MJM&M Oil Company is grading rig site for Movius No. 8, a field development well located on the southeast quarter of Section 10-28s-27e.

Humble Abandons Deep Test

Humble Oil & Refining Co. drilled to a total depth of 12,816 feet on Capital Company-G No. 1 and after running logs plugged and abandoned the well. The test was located four miles west of the town of Hanford on the southwest quarter of Section 7-19s-21e in Kings County.

Mount Poso Outpost

Steele Petroleum Company has staked location for Bowles No. 9, an outpost test to present production, located on the northeast quarter of Section 29-26s-28e.

Midway-Sunset Development

Signal Oil and Gas Co. has staked locations for three field development wells. Metson Nos. 20-24, 21-24 and 22-24 are all located on the southwest quarter of Section 24-11n-23w.

Socony Mobil Oil Company, Inc., has also staked locations for three field development wells. Annex No. 15 will be drilled near the center of Section 32-12n-23w, Pacific No. 19 will be drilled on the southeast quarter of Section 32-12n-23w, and Son-Crail No. 12 will be drilled on the northeast quarter of Section 8-11n-23w.

NORTHERN CALIFORNIA

Doheny Gas Completion

Patrick A. Doheny completed R. M. Farnsworth No. 1 flowing 2050 mcf of gas per day through a 20/64″ bean from the perforated intervals 7033-29, 7026-17, 7014-06, 6986-80 and 6976-72 feet. Drilled to a total depth of 8545 feet, a string of 5½″ casing was cemented at 7937 feet and cement cleaned out to 7070 feet.

The completion, a northerly offset to production at the West Grimes Field, is located on the northwest quarter of Section 3-14n-1w in Colusa County.

Gulf Outpost Gas Completion

Gulf Oil Corp. of Calif. extended the producing area of the West Grimes Gas Field ¾ of a mile to the southeast with the completion of McElroy Unit No. 1 flowing 8200 mcf of gas per day through a ⅜" bean with 1500 psi flow pressure. Flow is from the perforated intervals 7798-72 and 7767-63 feet. Located on the southwest quarter of Section 10-14n-1w in Colusa County, the well was drilled to a total depth of 8100 feet. 5½" casing is cemented at 8099 feet with a plug inside the casing at 8000 feet.

San Joaquin County Gas Test

Snee and Eberley of Carmichael, Calif., are grading rig site for Del Carlo-Allied Properties No. 1 to be drilled on the northeast quarter of Section 1-1n-4e. Located approximately 1¼ miles southwest of the McDonald Island Gas Field, the wildcat will be drilled to about 6000 feet.

Stanislaus County Wildcat

Occidental Petroleum Corp. is grading roads and rig site for Forni No. 1, a wildcat gas test located on the southeast quarter of Section 13-3s-7e. Occidental's test is seven miles northeast of the Vernalis Gas Field and is scheduled to be drilled to 7500 feet.

Deep Test Abandoned

Standard Oil Company of Calif. drilled to a total depth of 15,056 feet on Peter Cook No. 13 and after cementing casing and running several tests, plugged and abandoned the well. Standard's test was located on the southwest quarter of Section 12-4n-2e in Solano County, about one mile northwest of the Rio Vista Gas Field.

Texaco Offset Gas Test

Texaco Inc. is grading roads and rig site for McCune No. 3 to be drilled on the northeast quarter of Section 32-8n-1e in Yolo County. The test is a northeasterly offset to the company's McCune No. 1 completed in 1959 as a gas well, and in 1960 started producing 32 gravity oil at 154 barrels per day for the first commercial oil production in the Sacramento Valley.

Arbuckle Offset

Gulf Oil Corp. of Calif. is drilling below 5000 feet on Arcand-Meckfessel No. 1 located on the northeast quarter of Section 28-14n-2w in Colusa County. The test is a southerly offset to Pexco Inc.'s Bryan Land Co. No. 1 completed from the intervals 6402-16 feet and 6421-23 feet flowing 2000 mcf of gas per day through a ¼" bean.

Reserve Completion

Reserve Oil & Gas Company completed Liberty Farms-Reynolds No. 4, its third completion in the Liberty Island Gas Field, flowing 4800 mcf of gas per day through a 24/64" bean from the perforated interval 4743-4775 feet. Located on the northwest quarter of Section 30-5n-3e in Solano County, the completion was drilled to a total depth of 4850 feet and ce-

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mented 4½" casing at 4831 feet. A location has been staked for Liberty Farms-Reynolds No. 5 on the northeast quarter of Section 19-5n-3e, ½ mile northeast of production.

Buttes Wildcat Gas Test

Buttes Gas & Oil Company is drilling below 2000 feet on Buttes-Carroll No. 17 located on the northeast quarter of Section 32-16n-1e in Sutter County. The wildcat test is 1½ miles northwest of its Buttes Community No. 16 completed as a new discovery flowing 8000 mcf of gas per day from the Forbes Zone interval 4360-4442 feet.

Dunnigan Hills Outpost

Artnell Company has staked location for ROCO-Mauler No. 2 to be drilled on the northeast quarter of Section 3-10n-1w in Yolo County, approximately ½ mile southwest of production at the Dunnigan Hills Gas Field.

Buckeye Test Plugging Back

Gulf Oil Corp.'s Wilkins Unit C No. 1 recovered 2100 feet of salt water on a test of the lower interval between 9890-9980 feet and after cutting and pulling the 5½" casing has been plugged back to test higher up the hole. Located on the southwest quarter of Section 24-13n-1w, 3000 feet southwest of the Buckeye Gas Field, the test was drilled to a total depth of 11,678 feet.

Nordon Corp. Gas Test

Nordon Corporation, Ltd., has staked a location and is waiting on permit to drill Kuckuk No. 1-16 on the southeast quarter of Section 16-1n-5e in San Joaquin County. Nordon's location is approximately 4000 feet southwest of production at the Roberts Island Gas Field and will be drilled to about 8300 feet to test a 2000-acre block.

Lindsley Slough Gas Test

Standard Oil Co. is preparing to drill Cal Pack No. 8 on the northwest quarter of Section 23-5n-2e in Solano County. Location of the wildcat test falls about two miles west of the Liberty Island Gas production.

West Grimes Outpost

Gulf Oil Corp. of Calif. is grading rig site for Morris Unit No. 1, a southeasterly outpost test to the West Grimes Gas Field. Located on the northeast quarter of Section 10-14n-1w in Colusa County, the location is ¾ mile southeast of its F. Stapp No. 1, completed flowing 36,000 mcf of gas on an open flow potential test.

Atlantic Wildcat

Atlantic Oil Company is drilling below 6500 feet on Meridian Unit A No. 1, a wildcat gas test in the Grimes area. The test is located on the southwest quarter of Section 18-15n-1e in Sutter County. Nearest production is at the Grimes Gas Field three miles to the southwest.

Sherman Island Wildcat

E. C. Brown, Operator, is preparing to drill Upham No. 2 on the southeast quarter of Section 34-3n-2e in Sacramento County. The location is three miles southwest of the Rio Vista Gas Field.

Willow Pass Wildcat

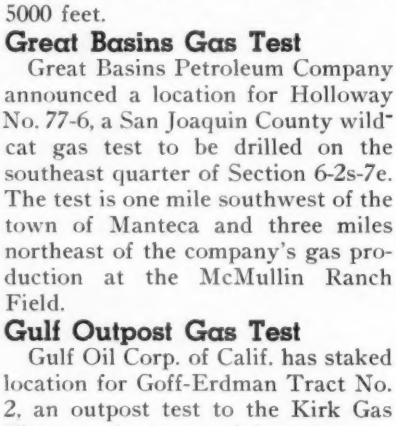
Trico Oil & Gas Company has staked location for Keller No. 2 to be drilled on the northeast quarter of Section 27-2n-1w in Contra Costa County. Trico's test is 1½ miles south of the Willow Pass Gas Field and will test the Eocene at about 5000 feet.

Great Basins Gas Test

Great Basins Petroleum Company announced a location for Holloway No. 77-6, a San Joaquin County wildcat gas test to be drilled on the southeast quarter of Section 6-2s-7e. The test is one mile southwest of the town of Manteca and three miles northeast of the company's gas production at the McMullin Ranch Field.

Gulf Outpost Gas Test

Gulf Oil Corp. of Calif. has staked location for Goff-Erdman Tract No. 2, an outpost test to the Kirk Gas Field, on the center of the northwest quarter of Section 15-13n-1e in Colusa County. Rig site is ½ mile north of present production.



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Vernalis Wildcat Testing

John M. Young is preparing to perforate and test gas showings logged in Young Unit No. 1 located on the northeast quarter of Section 29-3s-6e in San Joaquin County. Total depth of the well is 5225 feet, with 4½" casing cemented on bottom. Nearest production to the test is at the Vernalis Gas Field, 1½ miles to the northeast.

Maine Prairie Gas Test

Laurence A. Green has awarded a contract to Brown Drilling Co. to drill Crocker Estate No. 1 located on the northwest quarter of Section 25-6n-2e in Solano County. The test will be drilled to about 6200 feet.

COASTAL AREA

La Honda Wildcat Testing

Neaves Petroleum Developments is moving in production unit to test its Neaves-Union-Shapero No. 1 located on the northeast quarter of Section 20-7s-4w in San Mateo County. Total depth of the test is 2370 feet. 5½" casing with the botton 31 feet perforated is landed on bottom.

Summerland Offshore Development

Standard Oil Company of Calif. completed Standard-Humble-Summerland State No. 23 from a total depth of 7642 feet, and has two drilling wells on the offshore lease. Standard-Humble-Summerland State No. 25 on projected Section 35 is drilling below 7400 feet and Well No. 26, a new well located on projected Section 34-4n-26w, is drilling below 4000 feet.

Deep Test Cements Casing

Shell Oil Company drilled to 16,850 feet on Sloan No. 1 and is testing shut-off on the 7" casing cemented at 16,850 feet. Shell's test is located on the southwest quarter of Section 28-4n-18w in the South Piru area.

Adams Canyon Deep Test

Union Oil Company is preparing to drill Ex-Mission No. X-11 on the northwest quarter of Section 28-4n-21w in Ventura County. The well will be drilled to approximately 8500 feet.

Shiells Canyon Development

Texaco Inc. has staked locations for three development wells in the

field. Shiells No. 204, 205 and 206 are all located on the northwest quarter of Section 4-3n-19w.

Cat Canyon Outpost

Douglas Oil Company has staked location for California No. 57-14, an outpost test located on the southeast quarter of Section 14-9n-33w.

Shell Oil Completion

Shell Oil Company completed Saticoy No. 19 flowing 927 b/d oil cutting 1.7 per cent from six perforated intervals between 7301-10946 feet. Flow was through a 24/64" bean with pressures of 1050/875 psi. Located on the northwest quarter of Section 22-3n-21w in the Bridge area of the South Mountain Field, the well was drilled to a total depth of 10,955 feet and has 5½" casing cemented through ports at 9403 feet and 7300 feet.

South Mountain Completion

Texaco Inc. completed Norcop-B No. 6 flowing 700 b/d of 33.1 gravity oil cutting 2 per cent from the Upper Zone perforations 10,455-10,670 feet. Flow was through a 29/64" bean with pressures of 800/1550 psi. After failing to flow on a swab test, the lower perforations 11,940-12,398 feet are shut in. Located on the northeast quarter of Section 22-3n-21w in the Bridge area, the completion was drilled to a total depth of 12,400 feet and has 5½" casing cemented at 12,234 feet.

Phillips Offshore Test

Phillips Petroleum Company will drill State 2207 No. 13 offshore from Cojo in Santa Barbara County, on projected Section 13-4n-34w.

Sespe

Central Lease, Inc., is ready to spud Lynn No. 1 on Section 6-4n-19w and located 30 feet north and 40 feet east from the northeast corner of the Central lease. Barnes Core Drilling Co. has the drilling contract.

OTHER AREAS

Arizona

Bonanza Oil Company is preparing to drill Navajo No. 1 located on the northwest quarter of Section 30-40n-26e in Apache County. The test is 15 miles southwest of the Dry Mesa Field and will test the Mississippian at about 6600 feet.

Montana

In the Pennel area of Fallon County, Shell Oil Company has staked location for Government No. 42-14, a new exploration test. Shell's well is located on the northwest quarter of Section 14-8n-59e and will be an Ordovician test at about 8900 feet. It is slightly over one mile northeast of the Pennel Field.

Great Northern Drilling Co. is drilling below 900 feet on Pete Glein No. 1 located on the northeast quarter of Section 13-31n-58e in Sheridan County. Rig site of the wildcat test is four miles southeast of the Dwyer Field and will test the Mission Canyon at about 8100 feet.

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New Mexico

Gulf Oil Corp. and Mobil Oil Co. are drilling below 5100 feet on Navajo-Ojo No. 1 after topping the Gallup at 4860 feet. Located on the southeast quarter of Section 27-28n-14w in San Juan County, the well is a 6000-foot Dakota test. Nearest production is at the Cha Cha pool four miles to the northeast.

Bonanza Oil Co. is drilling below 5500 feet on Jicarilla No. 1 after a formation test of the Mesaverde interval 4816-4796 feet recovered mud and water. Bonanza's objective is the Dakota at about 7500 feet. The wildcat is located on the northwest quarter of Section 2-22n-3w in Sandoval County, nine miles southwest of the nearest Dakota production.

H. C. McAuley resumed operations on Dean No. 1 and is drilling below 3000 feet. Location of the Torrance County wildcat falls on the northwest quarter of Section 28-3n-9e and will test the Cambrian at about 4000 feet.

Utah

American Metal Climax and McCulloch Oil Co. are preparing to spud Government No. 1 located on the southeast quarter of Section 32-21s-13e in Emery County. The test is in the Black Dragon area and will be drilled to the Granite. Top of the Granite is expected at about 5600 feet.

Sunray Mid-Continent Oil Co.'s Utah-Federal-D No. 1 continues to test the Green River perforations 4987-5137 feet with a high gauge of 6350 mcf of gas per day through a ½" bean. Average flow has been 4000 mcf per day with a trace of water. Located on the southwest quarter of Section 14-7s-24e in Uintah County, an easterly outpost test to the Red Wash Field, the well has a total depth of 5410 feet and 5½" casing is cemented on bottom.

Pure Oil Company completed USA-E. Northwest Lisbon No. 1 flowing 1050 b/d through a 25/64" bean from the Mississippian. Flow is from 70 feet of perforations within the interval 8470-8672 feet. Located on the southeast quarter of Section 15-30s-24e in San Juan County, the completion was drilled to a total depth of 9037 feet and has 5½" casing cemented at 9029 feet. Top of the Mississippian was logged at 8448 feet.

THIS LAUGH OFF!!

Daughter: "Mama, what's a second-story man?"

Mother: "Your father is one, dear. If I don't believe his first story, he always has a second one ready."

The tire-maker's wife had insisted on taking along about every garment she owned and arrived at the station loaded with luggage. "I wish," commented the husband, "that we had brought your piano."

"Oh, quit trying to be funny," she replied.

"I'm not trying to be funny," answered the tire-maker softly. "I left the tickets on it."

Young bride: "Please, could you tell me where I could get some silk covering for my settee?"

Floorwalker: "Two aisles down, lady, for the lingerie department."

She: "I'm looking forward to my twenty-third birthday."

He: "You're facing the wrong way."

Wife: "Honey, your dinner might be burned a bit tonight."

Husband: "Don't tell me they had a fire at the delicatessen!"

The awkward age—when a girl is too old to count on her fingers but too young to count on her legs.

John went calling on the widow of his best friend who had recently died.

"Joe and I were mighty close friends. Isn't there something I could have to remember him by?"

Tearfully, the widow raised her eyes and whispered softly, "Would I do?"

First stenog: "Were there a lot of girls looking for husbands on that holiday cruise you took?"

Second stenog: "No, but there were a lot of husbands looking for girls."

A woman needs two good lines. One a man can listen to and one he can look at.

Rich Young Oil Man: "My gal has such crazy habits that I'm turning in my car and buying an outboard cruiser."

Friend: "You mean she likes boats and hates cars?"

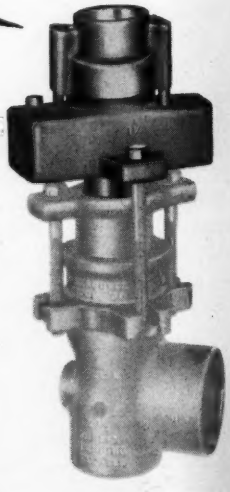
Oil Man: "No. She likes walking and can't swim!"

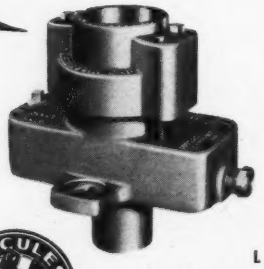
Ginger Ale: A drink that tastes like your foot feels when it has gone to sleep.

YOU CAN ELIMINATE BURNED PACKING FOR LESS THAN $20.00

HERCULES OIL RESERVOIR UPPER GLAND

Fits all Hercules Stuffing Boxes and costs only $18.75 to $19.75, complete.





The Hercules Oil Reservoir Upper Gland fits all Hercules Duplex Stuffing Boxes and was designed primarily for use on "problem" wells which pump-off and burn the stuffing box packing. The reservoir capacity is 1 fluid quart. The polished rod moves through the oil in the reservoir which lubricates and cools it. The oil film on the polished rod is controlled on the "up stroke" by the Split Cone Packing Ring (located between the Oil Reservoir Gland Body and the Cap). Excess oil and the dust or sand which invariably collect on the polished rod are wiped off by the Split Cone Packing Ring on the "down stroke." This excess oil and dirt are channeled back into the reservoir by means of the specially-designed Cap. The dirt will settle in the reservoir and can be removed through the drain plug.

Representative:
L. T. WALTIMIRE
P.O. Box 1612 — 1104 Dobrusky Drive
Bakersfield, Calif. • FAirview 4-4169

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MANUFACTURERS OF OILFIELD EQUIPMENT
GENERAL OFFICES AND PLANT • TULSA, OKLAHOMA
Export Representative Oil Field Equipment Co., Inc. 90 West Street New York, N. Y.